OBSERVATIONS

ON

LIFE ASSURANCE SOCIETIES,

AND

SAVINGS BANKS,

In Two Parts,

WITH

A MATHEMATICAL APPENDIX AND TABLES.

BY

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OBSERVATIONS

ON

LIFE ASSURANCE SOCIETIES & SAVINGS BANKS.

Preliminary Remarks.

Numerous institutions exist in this and other civilized countries, specially designed to encourage provident habits among the industrious of all ranks. Of those, which are unsupported by benevolent contributions, many have for their object to serve as banks for temporary deposits; and whether they be established under government or private controul they purport to afford to persons, whose time and attention are devoted to other matters, the opportunity of obtaining, without legal or other expenses, a remunerative investment for their savings, upon such a system and with such security as shall present little doubt of the money being safely laid out. It is known that a private individual usually finds it impracticable to obtain an advantageous accumulating interest for the smaller sums, which he can spare from his expenses. This arises from the circumstance of his having no means of procuring satisfactory information respecting the adequacy of any security contemplated for his investment; nor is he in the way of hearing of remunerative opportunities which present themselves from time to time. An association, however, of influential persons can command all that is wanting to the single member; and although the trifling contribution of each, by itself, might be too small to be capable of reproductive investment, it would become a proportionate participator,

and have its representative, in the aggregate profits of the general body.

It is desired, also, to combine, by way of incentive to a provident spirit, as far as may be practicable, an attractive rate of interest or profit, during the time that the money is invested, with power to the depositor of withdrawing the whole or part of the same at conveniently short notice of his desire to do so.

Where the bank's transactions are independent of any question of the life or death of the depositor, the power of withdrawal of money contributed, with accumulated interest, is, in almost every instance, conceded; and the amount standing in the Savings Banks to the credit of the industrious classes (upwards of 28 millions) is evidence of the popularity of such institutions. It is only recently, however, that an attempt has been made to afford to depositors some of the leading advantages, recognized as conferred by the co-operative system of assurance against the pecuniary contingency attendant on premature decease, whilst over the money paid in, they should retain the power of withdrawal, to a certain extent. Several assurance offices in England and Scotland have adopted modified forms of the plan of Deposit Life Assurance, which we suggested by a brief outline in *another publication; and they have only wanted more general publicity, and, perhaps, an explanation of the actual principles adopted in the construction of their deposit life tables, to meet with great success. In this essay, our desire is to bring forward, as being suited to the present requirements of the middle and humbler classes, and more especially of depositors in savings banks, a detailed account of the deposit system, and some other self-recommending principles, with the mathematical formulæ, whether for terms certain, or for life contingencies. At the same time, observations will be made on the obstacles yet attending the extension of life assurance among the middle and industrious

* *Treatise on Industrial Investment and Emigration*, p. 267.

classes, with the remedies we advocate for the defects still existing in the practice of many of the companies themselves.

To this will be added an inquiry into the condition of Savings Banks, a subject to which public attention has been so painfully drawn of late years by the singular disclosures on the one hand of fraud and mismanagement, in respect to their internal system, and of unanticipated, but daily increasing, national liability on the other. We propose to divide the Essay into two parts:—*viz.*,

PART 1. Observations on Life Assurance, and on the Deposit and other systems, having for object its extension.

PART 2. Account of the present position of Savings Banks, with suggestions for their improvement.

The second part will contain remarks on Sir C. Wood's Bill of 1850, which, some of our readers may remember, contained, among other important clauses, provisions affecting the whole system of savings banks deposits, and not only proposing to alter, in a manner which appears to us undesirable, the present plan, whereby poor people are enabled to purchase government deferred annuities or provisions for old age, but enacting, that the National Debt Commissioners might undertake to grant a modified species of assurances for sums payable at death.

A review of the clauses of that Bill, and of a new one, said to be in preparation, will lead to a discussion of the advantages that would arise from the facilitation through the machinery (or by making it part of the system) of savings banks, of the receipt of small deposits whether for the purchase of government annuities, and of deferred sums or annuities by way of provision for old age, upon the principles, involving *two* rates of interest, which are laid down in the Appendix to this Essay.

PART I.

Observations on Life Assurance, with an account of the Deposit and other Systems having for object its extension.

Art. 1.—Our object in this part will be, mainly, to bring forward suggestions for the greater extension of life assurance among the middle and humbler classes, by removing, as far as may be practicable, the obstacles which exist, both as regards the public, and the life assurance companies themselves, in the adaptation of the system to their respective requirements. To make the remedies intelligible, we shall have to mention some of the obstacles; but it will be advantageous to give, beforehand, a short account of the nature of a life assurance company. For this we will use the description of an able writer:—

"If a large number of persons, all of the same income and prospects, and all certain of the same duration of life, were to choose a common bank, in which to deposit their savings, each laying by a given proportion of his income, it is obvious that each would receive the same sum as the rest at his decease; but if the lives were of unequal and uncertain duration, this result would no longer be produced. It might, however, be attained by a covenant, that all sums paid in should remain till all were dead, and then be equally divided among the executors of the parties. Such a bank might be called an equalization office, and it would present the first approximation towards an insurance office such as those which at present exist.

"As yet, we have not mentioned the interest of money. Suppose the equalization office to pay no interest; and suppose all the lives to be 20 years of age, such as are described in the Carlisle tables, the average duration of which is 41½

years. If then, every person pay £1 per annum, each will ultimately receive £41½, which is the mere compensation of the inequality of life. Such persons would enter into a mutual covenant, by which those, who lived beyond the average term, would divide the surplus of their savings among those who fell short of it.

"Probably, if the following question were put to all those whose lives are now insured:—'What is the *advantage* which you derive from investing your surplus income in an insurance office?' more than half would reply:—'The *certainty* of my executors receiving a sum at my death, were that to take place to-morrow.' This is but half an answer; for not only does the office undertake the equalization of life, as above described, but also the *return of the sums invested, with compound interest.*

"No one can form an accurate idea of such an establishment who does not consider it as a Savings Bank, yielding interest, and interest upon interest. This is the reason why an office, which charges for its insurance more than it is worth, as an insurance, may nevertheless put its contributors in a better position than they could have held, if there had been no such institution. To make this matter clear, let us consider the working of a simple investment office. A large number of individuals subscribe a sum, which they trust to an individual or a company to employ, yielding them the return at some fixed but distant period. Let each share be £100. The best thing an individual could do with so small a sum, so as to have perfect security for its return, would be to invest it in the funds, at 3½ per cent. [This was written some years back.] He might also invest the interest, and thus obtain compound interest: but it is not easy for an individual to do this. Unless he provide an agent to draw the dividends immediately on their becoming due, various circumstances will happen to prevent the immediate investment of the interest. It is not at all an unfair calculation to suppose that, upon each

half-yearly dividend, a month will be lost, so that nominal compound interest for 42 years will only be really for 35 years. A single pound, therefore, laid up by a man aged 20 years, and improved for the average term of his life, at 3½ per cent., would only become £3⅓; while in the hands of a person who lost no time, it would become £4¼, or nearly a pound more."

2.—As we have said in the preliminary remarks, an association or company, who can, by co-operation, command large sums of money, and who delegate the management of its investment to one or more skilful persons, can always make the best interest which the market will afford, at a cost much lower than the private individual must incur. From the justly supposed superior security of the public funds, and from the conveniences which they offer for transfer or sale, if necessary, they will always, in ordinary times, for permanent or lengthened investments, represent the lowest rate of interest which an investor can obtain. The numerous other mediums, which offer a higher rate of interest, are generally only accessible to those who can command considerable sums; and, inasmuch as the better the apparent attraction of the investment over public securities, the greater the risk of loss attending it, considerable knowledge and practical experience are required to distinguish between the sound and the unsound. These advantages an association can afford to all its members, as a slight per centage on their payments will defray the cost of employing the whole time of one or more persons skilled in money matters; and the recurrence of occasions for large investments enables the association to realise for division, not only a higher *rate* of interest per cent. per annum, than the single member could obtain, but in addition, also, from the rapidity and uniformity of its transactions, it can secure a surplus, divisible by way of Bonus.

This surplus advantage arises from the manner in which fresh interest is obtained by no delay occurring in investing the old interest; and, upon a large average of transactions, the

society's periods of payment harmonize with its receipts. Let us suppose (with the author before quoted) that it should happen that ten individuals together paid £100 into the office on account of life assurance premiums in the same hour in which the executors of a deceased contributor received a claim of £100. The hundred pounds, which in the theory of the process should be sold out, or otherwise set free to meet the claim, is in its practice supplied by new premiums, so that the premiums of those contributors are making interest from the hour in which they are paid. The advantage will be greater in large transactions. The payments would, also, be made without any loss arising from the sale, perhaps at an unfavourable price, of stock to meet the claim. All expenses paid, it may be stated, with correctness, that an investment society can realise (apart from a bonus) $3\frac{1}{2}$ per cent. per annum compound interest. Hence, £1 improved during the average life of an individual, aged 20 years, would become £$4\frac{1}{4}$.

The institution thus described is simply an office for the investment of premiums and the equalization of results. It becomes an Insurance office, when it undertakes to pay a fixed sum for a fixed premium, at the end of a given time after the decease of the party; but, as Mr. Babbage remarks, so little was known of the relative value of human life, at the time life assurance began to be adopted in England, that persons were indiscriminately insured at one common rate, without regard either to age or health; so that the young paid for the old, and the strong for the infirm,—a manifest injustice to the young and healthy members. Five pounds were at first demanded as the price of assuring a hundred pounds for one year on a life of any age; and, at one establishment, middle aged and old lives were not taken even on those terms. This sum was, probably, fixed upon from its appearing that the annual number of deaths in London was nearly one in twenty of the population. It must soon have

occurred to those who wished to have recourse to such transactions, that the chance of a person, aged twenty, dying within any given period, could not be so great as that of a person of forty, dying within the same limit; and, consequently, that it was not equitable to demand the same rate of premium in both cases. And it must also have appeared, that if a table of the number of persons, amongst a considerable population, dying annually at the different ages of life could be procured, by its means the relative chances of life of persons of different ages might be assigned. A small increase of experience, therefore, naturally induced inquiry into the Rate of mortality actually prevailing, till at length a proportionate premium was fixed for every age.

3.—Associations for assurance having been formed, it was deemed expedient to fix the rates of annual or other periodic contributions upon such a principle that not only might reasonable expenses of management be provided for, but, also, that every possible excess of early mortality among the members of any individual society beyond the average of the community at large, (according to the data by which the fundamental table of mortality had been constructed) should be met with a marginal fund. Hence it has been customary to charge assurers a somewhat higher * premium per cent. than that shewn as necessary by the table of mortality; and this reasonable caution operates without injury to those whose families benefit by the policies of assurance, in case of premature death; whilst those subscribers, who survive beyond the tabular average of life, have a compensation, by way of bonus, in case the institution meets with a less degree of mortality than the premiums provided for.

4.—In general the Bonus principle is approved, because it

* [In the Appendix to this part are given the formulæ and methods for calculating *Premiums for assurance* according to any table of mortality; and, in the Tables, are given the elementary data of the Carlisle and English Life Laws of Mortality.]

must be considered as presenting one main improvement, that was wanting to make life assurance perfect; inasmuch as it removes the only selfish objection to which that beneficent invention of science was formerly open: *viz.*, that those, who *live*, pay for those who *die* beforehand; since the periodical allotments of bonus, if calculated upon safe principles, tend continually to restore the balance of advantage to those members, who survive each division of profits.*

5.—The desire on the part of the public to provide, in periods of comparative prosperity, against privations attendant on adverse circumstances, having led to the formation of assurance companies, as the safest and most advantageous mode of effecting that object; the experience of more than a century, and the great increase of assurance institutions during that period, have not only established their soundness, but confirmed beyond doubt the fact that they offer one of the most legitimate mediums, by which careful and thrifty persons can invest their savings, in such a way as to secure the greatest possible profit, with the least possible risk.

When the † first Life assurance office was founded at the early part of the last century, considerable distrust for a long time existed in the public mind respecting the safety of a society, which undertook to guarantee a definite large sum payable to an assurer's family, whenever he should die, in consideration of a small annual payment to be made by him during his life. But when years passed away, and the scheme so far from becoming a failure, met with extraordinary success, the feeling of the world changed, and in all directions new societies began to spring up, who sought for and soon obtained a remarkable amount of business. These old companies were accustomed, however, to conduct their business in an

* See, also, upon this subject, various valuable papers read before the Institute of Actuaries by Mr. Jellicoe, one of the Vice-Presidents.

† The most ancient existing Life office, and one of the best, was founded in 1706.

exclusive manner, regarding their own profit more than the convenience or want of the assured; and it is only within a recent period that societies have arisen based upon liberal principles, and extending their operations to an increased variety of objects. The mode of proceeding on the part of the old companies necessarily narrowed the field of their usefulness. Hence we find that even in the middle classes only a small proportion of persons are assured; whilst, with the exception of a few offices of modern date, the industrious classes are wholly excluded, and although they have availed themselves of the advantages of savings banks, yet those excellent institutions offer only a *personal* profit upon investments, and but little advantage to a depositor's family.

6.—The Industrious classes have been, also, debarred from the benefits of life assurance by the uncertainty of their incomes. Even where they have insured, instances have too frequently occurred in which they found it no easy matter to keep up their assurance policies, when they advanced in years and their means of existence, as often happens, began to diminish; and yet, if a regularity of payment be not continued, the whole benefits, which they have so long struggled to secure, in too many offices would be forfeited to the proprietors or other members. All, who have had opportunities of hearing the objections which are most frequently mentioned when life assurance is urged on public attention, are aware that one of the very chief of them is the extreme unwillingness of a party to burden himself for life with a heavy annuity, in the shape of a periodically recurring premium, whilst he does not know how soon his circumstances, or views, may change; and when he knows further, that if he be compelled to discontinue his assurance, he may lose nearly the whole of what he has contributed. Again, many are equally unwilling to lock up from their own use, during their lifetimes, the funds which have been accumulating, seeing that occasions may arise, when most pressing need may be felt for a portion thereof.

Such an objection as the above is not imaginary:—For example, at age 40, a man in good health can assure his life by Table 1, page 51, for £500, by an annual premium of £14. 17*s*. 6*d*. Now it is exceedingly natural that, where his income is fluctuating in point of time or amount (and those whose incomes are not of a fluctuating nature, are the exception to the great body of the community), he should entertain much hesitation before undertaking such a payment. This circumstance, we repeat, has had a most powerful effect in restricting the application of life assurance.

7.—Another obstacle exists on the part of most of the assurance companies. They decline to receive Small payments, such as monthly or weekly, principally from the trouble and expense attending the same. This, unfortunately, is what persons of restricted means mainly require. Moreover, the companies themselves are placed in an awkward position. For, let us take the case of an assurer proposing for a small sum, say £100, purchasable by weekly instalments. At age 26, the rate is 2*l*. 0*s*. 0*d*. per cent. (Table 1,) or under 10*d*. per week, and the preliminary expenses attending the medical examination of the life, with the inquiries into his habits of life, and the cost and trouble of the policy and papers, all combine to make companies look doubtingly on business, where the receipts at first will not cover the expenses;—although they might, perhaps, meet the case by requiring the first year's premium to be paid in advance, but allowing the second and subsequent payments to be made in small instalments. (See Art. 39.)

8.—A great difficulty attending the present system is the recurrence of *Fixed* payments;—whereas a man (at say 35 years of age) who has assured his life for £1000 at 25*l*. 10*s*. 0*d*. a year, or for lesser or larger sums, might desire to pay one year £25 or £20, another year £35 or £30, and have the option in his own hands, within of course certain limits and upon certain notice, of varying, as his necessities dictated, the amount and periods of his payments.

9.—Again, where policies are effected on the lives of other parties, as by Creditors upon the lives of Debtors, to secure a sum unpaid, objection is raised, that if the creditor die before his debtor, his family may not be able to keep up the policy, and the premiums paid may be lost.—To meet this and all similar cases where the payment of the premiums depends upon another life besides that assured, we recommend that the premiums be calculated thus:—That the present value of the assurance be estimated on the life involved; the value of the premium be measured by the joint existence of the life assured and that of the purchaser, so that the payment of premiums should cease when either life dropped; the sum assured not to be payable to the creditor or his heirs, until the debtor died.

10.—The other remedies and improvements we advocate for more general adoption are:—

1. The *Suspension* principle.
2. That parties, desirous of discontinuing their annual premiums altogether, be allowed to surrender the policy to the office, which should return them a portion of the premium paid, commensurate with the risk that has been incurred. Or, instead, another policy should be given of less amount, equivalent to the premiums paid, and free from future payments.
3. * The *Deposit* system.
4. The *Transfer* or *Substitution* principle.
5. * That the payment of premiums should be allowed, *annually, half-yearly, quarterly, monthly, or weekly,* or to be compounded for by one single payment, commonly called the *single premium;* or that they may be made on the *descending* or *ascending* scales—that is, the annual payments diminishing or increasing in amount, so as to

* The articles marked thus * are already adopted by several Societies.

suit the convenience of parties whose circumstances are subject to change :—For instance—a man, whose income arises from property and will probably not alter, would find it convenient to pay for an assurance on his life by annual payments, which diminish as his family increases and his children growing older entail greater expenses upon him. On the other hand, a young man starting in life, and hoping to increase his future income by his professional or other occupation, would prefer to pay less at first, and more afterwards, for the assurance which, at his death, is to provide for his family.

6. * That Half the annual premium be kept unpaid for the first seven years at £5 per cent. interest, if desired by parties assuring their lives on the profit scales. (See page 29.)
7. * That there be no Fees on entrance, nor any expense in effecting an assurance, except the cost of the government stamp on the policy.
8. * That thirty days be allowed for the payment of renewal premiums after they become due ; and even after this delay, that the directors allow the payment of the premiums, with a small fine, provided the health of the party be satisfactorily shewn to continue good.
9. That all claims by death be paid by the society at the expiration of one month, after satisfactory evidence of the death of the assured has been furnished ; or a part of such claims to be paid at once, deducting the usual discount at £5 per cent., if the family of the deceased require it for immediate purposes.
10. *That policies on the lives of parties, *who may die by suicide, duelling, or the hands of justice, be not void as respects the interest of persons to whom they may have been legally assigned.*
11. *That the assured may reside in *any part* of Europe

(except Turkey and the Levant) or in the northern part of the United States of America, in the Cape of Good Hope, and the Australias, *without any extra charge*, excepting for the sea risk in proceeding to, and returning from, the last-named countries.

12. *That, also, should the assured have occasion to proceed to any other part of the world, they may keep up their policies by paying an increased rate, commensurate with the risk incurred; which extra payment should cease on their return to Europe.

13. That the machinery of the Savings Banks be used for receiving payments as low as pennies.

We refer to other suggestions for the greater development of life and other assurance to Arts. 15, 31, 37, 40, and the Appendix.

The Suspension principle.

11.—The first remedy of Suspension and its origin may be thus described:—

The principles of calculation and practice of Life Assurance not being so well appreciated in the beginning as now, the older companies persisted for many years in a system of high charge as regarded their premiums, and rigid regulations respecting the continued validity of their policies. The onward spirit of the age, and the increasing discrimination of the public, have gradually induced them of late to issue policies upon fairer terms to the assured, in which one of the first new features was "*The returning an assurer, on surrender of his policy, a portion of the premiums he had paid, if he found himself unable to keep it up*," whereas it had been previously the custom to declare the premiums altogether forfeited.

With this improvement, the old plan of assurance went on as before, many policies being discontinued from time to time, through the temporary necessities of those who, not being always able to pay the renewal premium, had been compelled to surrender their policy to the office at a very great sacrifice.

No provision was ever attempted to be made for what, unfortunately, as we have before said, so often happens to persons, whose incomes are derived from professional exertions or trade, who frequently find that money, which they count on receiving, does not come in at the time they expected, and this too, perhaps, just when a renewal premium has become due upon a policy, the non-payment of which within the three weeks' or a month's grace (usually allowed) at once causes the policy to *lapse*, and thus destroys all the advantage or benefit, which the assurer had hoped (after perhaps many payments) to secure to his family at his death.

It was rather a matter of surprise (says a leading periodical) that, "while so many other improvements have from time to time been introduced in the practice of life offices, yet no society, until lately, has ever thought of removing so important an objection in the system, which must materially have militated even against their profits, by deterring many careful persons from assuring, who naturally felt little disposed to commence any undertaking, which possibly could be frustrated by *one year's temporary pressure in their incomes.*"

The number of persons now assured is great, compared with what was the case twenty or thirty years ago, and yet it is lamentably small relative to the population of this country. No one will venture to say that the numbers assured would not have been much greater, if the objection we speak of had been removed, and few of the persons already assured are able to feel confident that the time may not come, when they may themselves be *temporarily* quite unable to meet the renewal payment on their policy when it becomes due. Quoting again:

"This objection, so often quoted and so long felt by its disastrous results, had remained so long unprovided for, that it was scarcely imagined it would ever be remedied. There is now, however, a leading feature in one * society, which removes this obstacle in life assurance, and its effect can be

* The Western Life Office.

appreciated by all. By the principle devised upon which the new privilege of that society is grounded, it will be evident that no policy can ever be forfeited from mere temporary pressure in the monetary affairs of its possessor." It is thus stated:—

"*As it may happen* that a party may, from unforeseen circumstances, be *unable to pay a premium* when it becomes due, by making application to the directors, he will be allowed once (or oftener, should the value of the policy at the time of the application permit it,) to have the privilege of *Suspending the payment* of that premium, (provided he has already paid three whole premiums at least on the policy, and it be one for the whole life of the assured.) And his policy will be endorsed to the effect that it continues in force, as if the premium suspended were paid, being, however, charged with a debt equivalent to that premium (and its interest at £5 per cent.) which will be deducted from the amount of the policy when the assured dies. The policy holder shall have it in his power to free his policy from the debt, at any time, by paying the amount due. The great advantages of this feature must at once be seen, since it removes the main objection to the ordinary system of life assurance, by which an assurer often loses all the benefit he sought in paying regularly the premiums for many years on a policy, because from temporary difficulties he is unable to pay a premium when it becomes due, and the policy, consequently, lapses to the office. Half-premium policies will not be entitled to this privilege, unless the arrears due shall have been previously paid up. Fourteen days' notice prior to the premiums becoming due, requesting this permission, must be given."

Example:—A party aged 26, assures his life for £1,500 on Table 1, page 51, at an annual premium of £30. At the beginning of the fifth year of the existence of his policy, he finds he is without the money to pay the fifth premium. He avails himself of the privilege allowed by the society, and

obtains the endorsement on his policy as before stated. The year passes away, and at the beginning of the sixth year he is alive, and still not able to pay up the suspended premium. He pays, therefore, the sixth premium and the successive ones after that, and leaves the suspended premium as a debt against his policy; paying, however, annually, thirty shillings interest upon it

Where the policy is assigned or otherwise held in trust, the consent of the party interested must be given, in writing, to premiums being suspended.

" We approve very highly of this plan, (says the Review referred to) for we have seen valuable policies lost to families by such pressure as is here described, and sold by auction at the price, perhaps, of three or four hundred pounds, after premiums to the amount of £1000 or £1200 had been paid upon them to the richest and most esteemed old assurance companies in London; and we do not hesitate to say, that any relief from so perilous a predicament, especially in times so precarious and changeful as those in which we live, must be welcomed as a manifest improvement in the system."

12.—This plan of *Suspending the payment* is unique as yet in life assurance operations for three reasons:—

" 1st. Because most societies will not lend on the mere security of the policy (if it has only been three years, or thereabouts, in existence), sufficient money to pay the premium; simply from the fact that their saleable office value of the policy, at that time, is not equal to *one* premium.

2dly. The offices under the old system will *never* make any advance under £50, and some not under £100, and even £200, whilst the premium may be only £15 or £20; thus rendering it necessary for a person, who wishes merely to meet the payment which has become due on his policy, to borrow more than he requires, for which, also, he has to pay a high rate of interest; and this he can only do, after such a number of years has elapsed as would cause the

policy to be of sufficient office value to be security for the £50 or £100, which is the lowest sum that would be lent.

The 3rd is more important than all. In obtaining a *loan* from a society on the *security* of a policy, it must always be *deposited* in the hands of the society during the whole time that the loan continues. This at once is therefore an important objection, since policies are frequently required for *commercial purposes* (such as mortgage security, &c.,) and few persons would like, or be even able, to deposit their policies in the hands of the office by which it was issued."

None of these objections exist in the system above adopted. The privilege is granted without condition or deposit of the policy, and even when three years only have elapsed in its existence. The payment of a premium may be *suspended* should the assurer unexpectedly be unable to meet it, whatever be his age or the state of his health.

13.—Several instances have arisen in our own experience of the benefits conferred by the Suspension principle. One we will mention in detail:—In 1847, among the numerous failures, a leading firm became bankrupt, and the services of its officers being no longer required, they were dismissed. One, who had been twenty years in a high confidential appointment in that firm, partook of the general misfortune. He lost at once a liberal income, relying upon the continuance of which he had effected assurances to considerable amounts in several offices. Not being able to make the renewal payments for 1847, he applied to the offices in question, but excepting from that one, which had adopted the Suspension principle, his replies were unfavourable. All his policies therefore, but one, dropped and were lost to his wife and children. The other was allowed to continue in force. Within twelvemonths, his past meritorious services and his qualifications brought him again into good employ, and he was enabled to keep up the Suspended

policy. By the rules of the other assurance offices, he could within six or twelve months have possibly revived his policies, on paying a fine for their having lapsed, and *provided his health was sound and unimpaired.* But unfortunately, as so frequently happens, that health, which had been excellent some years previous when the assurances were effected, had been deteriorating for some time, and the sudden failure of the firm in 1847, with its attendant anxiety, had not led to its improvement. The medical officers could not advise their Boards that the life was re-acceptable, or that the policies should be revived. He lost, thus, for his family, by temporary pressure arising from temporary loss of employment, in all but one solitary instance, the assurance protection which he so anxiously had desired for his family.

14.— Other examples might be mentioned, such as that of an eminent contractor whose assurances to upwards of £38,000 were perilled in that same year by the difficulty of making the renewal payments, or of realising without much loss on other property to enable him to do so;—of a private gentleman, called unexpectedly to pay a large sum for the delinquency, in a government situation, of a friend whose surety he had become: a sum which was equal to two-thirds of his income, and left him without the means of meeting his own usual payments;—of professional men, and others of apparently average fixed incomes, who have been from temporary difficulty unable to pay up their premiums on their policies.— The cases should come home to all our readers; and the Actuaries of Assurance Offices should cease to say, "Oh, what trouble such a plan would entail." They should consider more the *unnecessary* harshness of their present system. We have said unnecessary, because the measure, we advocate, has a principle for its basis not unprofitable to the office. The privilege, by our wording, can commence only when at least three premiums have been paid, because then the true value of the policy, or the sum which could be theoretically allowed to

the assured were it surrendered, is in general more than sufficient to cover the temporary insurance, for one year, at the age of the party's application to suspend. The office runs no risk, as the next and following premiums would be paid in due time, and interest at 5 per cent. could be charged on the sum suspended. After a few more years of regular payment, the policy could, if required, bear a second or more suspensions. The office would always be, *de facto*, protected from other than the usual risk, and would be making 5 per cent. interest for the money-value of the privilege conceded.

15.—The second improvement is very generally adopted;—that is to say, an assurer can at any time cease his future payments, and either have a proportionate return on the premiums which he has paid, or an equivalent reduced assurance payable at death. With a few exceptions the offices do not, however, *at the time of issuing their policies*, fix the scale of reduced assurance, nor forego the arbitrary power, too often exercised, of dealing at their will with the assurer, when his time of difficulty has come and he is compelled to accede to almost any terms, from being unable to keep up the payments upon his policy. One amendment is necessary, which could be accomplished by including in the conditions of the policy some such words as the following:—

That, at any time after five premiums have been paid, the assurer shall be at liberty to cease all future payments on his policy, and be considered as having purchased a reduced assurance, (payable three months after his decease,) to be estimated by substracting from the original amount of his policy, that amount of assurance which the rate of periodic premiums, which he has been paying, would purchase at his advanced age, when he proposes to cease all future payments. Taking, as the standard of assurance cost per cent. per annum, at his advanced age, $(1 - \frac{m}{100})$ of the rate shewn by the tables of the society, which should be printed on the back of the policy,

$\frac{m}{100}$ being the rate per cent. of office *protective margin* charged in the premiums.

The principle of such a clause is this:—If, at age *a*, the cost of a policy for £1000 is £20 a year, and, at age *b*, £35 a year;—then, reserving off the £35 in favour of the society, a margin, say, of 20 per cent. (or whatever it may be that has been charged in the annual premiums for the security and expenses of the office), £28 a year, at the advanced age *b*, is the *net* premium, which would assure a new policy for £1000; therefore, by rule of three, £20 at the same advanced age would assure £714. 5*s*. nearly; which is the sum that a policy for £1000, taken out at age *a*, should be diminished, if, at age *b*, the assurer determine to cease his future payments,—or, the policy should be reduced to £285. 15*s*.

By such a plan, policy holders would, at all times, be aware of the *minimum* amount of Reversionary assurance, which they would be certain to have purchased, should unforeseen difficulties prevent the keeping up of their policies.

The Deposit system of Assurance for Sums payable at Death.

16.—The third improvement in life assurance is the *Deposit system*, by which, to a certain extent, an objection to Industrial assurance may be removed. For explanation we will quote from the prospectus of the assurance * office, for which we first originated it. The mathematical formulæ and details of the principle, based upon *two* co-existent rates of interest, will be found in the Appendix.

This system of life assurance presents peculiar attraction to parties whose incomes are *liable* to *change*; inasmuch as, by depositing in the office *small or large sums*, not regularly year by year, but when it suits their convenience, and in such

* The Western Life Assurance Society, 3, Parliament St., London, (1842.)

different amounts as they may wish, they can obtain a policy of assurance, whose value increases with the number and amount of the deposits made. With the further advantage, that should the assurer at any time wish to *withdraw* the whole or part of the money deposited, he may do so on giving *two weeks'* notice to the office, which will return him the money required, with an endorsement on his policy, reciting that its value is diminished by an amount proportionate to the sum withdrawn. This is illustrated in the example to Tables A, B.

According to the *ordinary* plan of assurance, a comparatively small *annual* premium secures a large sum payable should the assurer die even the day after the *first* premium has been paid; but the premiums must be paid regularly year by year, and they cannot be withdrawn from the society, except in the shape of a loan on which the payment of interest is required.

The deposit *plan presents, on the other hand, the advantages of a secure investment for money, which, whilst it is constantly improving and increasing in value, may at any time be* withdrawn, *wholly or in part, with the same facility as a deposit account with a Banker. And, at the same time, so long as the money or any part of it remains deposited with the society, it produces a corresponding assurance effected on the life of the depositor, and entitles his family at his death to a sum of money varying with the age at which the deposit was made.*

The same particulars relative to the health of the party are required as in the case of an ordinary assurance. And the party assuring may make his deposits as often and when he pleases, or only once.

Parties assuring by the following tables would be entitled to a share in the profits of the society, from time to time declared; so that the policies would be periodically increased without any further outlay.

* TABLE A.

AMOUNT PAYABLE AT DEATH, *which may be secured by the* SINGLE *Deposit of £.100 at the respective Ages against which each such Amount is set, with profits.*

Age next Birth-day.	Amount Assured. £. s. d.	Age next Birth-day	Amount Assured. £. s. d.
16	268 9 9	39	190 9 1
17	264 16 2	40	187 19 10
18	261 5 8	41	185 8 1
19	257 10 9	42	183 0 2
†20	253 12 5	43	180 12 10
21	249 17 9	44	178 4 6
22	246 6 8	45	175 15 8
23	242 6 11	46	173 6 6
24	238 11 6	47	170 17 7
25	234 10 7	48	168 6 2
26	231 1 7	49	165 12 1
27	227 11 10	50	162 17 4
28	223 13 6	51	160 1 9
29	220 7 9	52	157 6 11
30	217 9 5	53	154 15 2
31	214 10 1	54	152 3 9
32	211 13 6	55	149 13 5
33	208 16 2	56	147 1 1
34	205 15 2	57	144 16 11
35	202 14 5	58	142 11 5
36	199 14 10	59	140 10 3
37	196 14 5	60	138 13 4
38	193 13 1		

TABLE B.

AMOUNT PAYABLE AT DEATH, *which may be secured by the* SINGLE *Deposit of £.10 at the respective Ages against which each such Amount is set, with profits.*

Age next Birth-day.	Amount Assured. £. s. d.	Age next Birth-day.	Amount Assured. £. s. d.
16	26 16 11	39	19 0 10
17	26 9 7	40	18 15 11
18	26 2 6	41	18 10 9
19	25 15 1	42	18 6 0
‡20	25 7 2	43	18 1 2
21	24 19 9	44	17 16 5
22	24 12 8	45	17 11 6
23	24 4 8	46	17 6 7
24	23 17 1	47	17 1 9
25	23 9 0	48	16 16 7
26	23 2 2	49	16 11 2
27	22 15 2	50	16 5 8
28	22 7 4	51	16 0 2
29	22 0 9	52	15 14 8
30	21 14 11	53	15 9 6
31	21 9 0	54	15 4 3
32	21 3 4	55	14 19 4
33	20 17 7	56	14 14 1
34	20 10 6	57	14 9 7
35	20 5 5	58	14 5 1
36	19 19 5	59	14 1 0
37	19 13 5	60	13 17 4
38	19 7 3		

* [At the end see also *Deposit Tables* for Terms-certain deposits and Deferred annuities, which are calculated upon the formulæ for two co-existent rates of Interest which we recommend in page 2 of the Appendix.]

† EXAMPLE :—Thus, a person aged 20 may, by the *single* deposit of £.100, acquire a Policy of £253 12*s*. 5*d*., or, in other words, a right to have £253 12*s*. 5*d*. paid at his death, even if that should take place within the same year in which the deposit is made; or if he have already made deposits, his Policy will be increased by this further amount, and he may, *at any time*, on giving TWO WEEKS' notice, draw out the whole or any part of the money so deposited, by the surrender of so much Assurance as, at the advanced age to which he has attained, would be purchased by the money withdrawn. Thus, on attaining the age of 60, he can withdraw £100 by surrendering £138 13*s*. 4*d*. of his Assurance, and the balance £114 19*s*. 1*d*., will remain to be paid to his representatives at his death.

‡ EXAMPLE :—Thus, a person aged 20 may, by the *single* deposit of £10, acquire a Policy of £25 7*s*. 2*d*., or, in other words, a right to have £25 7*s*. 2*d*. paid at his death, with the other advantages detailed in the Example to Table A.

17.—The deposit plan is capable of a variety of modifications, according to the life contingency it is desired to meet: one extension of considerable importance is the payment to the depositor himself, *during his lifetime*, of current interest on the money deposited, with the further advantage of a policy of assurance of lesser amount, secured payable to his family at his death.

Another improvement on the system, not at present practised, would consist in the allowing the assurer to keep up the difference between the amount of his policy, at the time of withdrawal, and the sum deposited, by that annual premium payment, which would have been charged when he entered.

18.—Our own impression is that the Deposit system will in no way interfere, as some Actuaries have imagined, with the ordinary Assurance business of fixed periodic premiums; as it does not present to proposers anything approaching to that attraction, which in general induces them to assure, viz.: that by a small annual payment a considerable provision can be secured to their families; or by co-operation, the evil attending the decease of the head of the family can be averted;—but, on the other hand, there are various occasions in which persons are unwilling, or, frequently, unable, to incur the responsibility of fixed payments recurring upon a policy, and nevertheless they would, perhaps, be anxious to have so much insurance as any single sum, they might lay by, would produce if placed as a deposit; the more so, when coupled with the power of withdrawal of the whole or part of the same.

19.—The peculiar advantages offered by this Accumulative mode of Assurance, will be found to be applicable to an infinite variety of cases. For instance: Parents and guardians may make provision either for the present wants of children, or in the event of their premature death, for the purpose of recovering all charges incurred for their education and advancement in life. Thus, let a parent determine to lay by £50 per annum for the benefit of a child, now

ten years of age, and to expend £75 per annum on his education and entrance into life. By effecting an *Accumulative Assurance*, the case would stand thus:—£50 is immediately deposited for the assurance, while the £75 is devoted to the purpose of education. If death should occur in the first year, the Company would pay £140, which would restore more than both premium and cost for education. On the payment of subsequent Deposits* of £50, the sum assured would become £279. 5*s*. in the event of death during the second year; and thus with each successive payment, this sum would commensurately increase; so that in the—

3rd. year it would be	£417	3	11
4th. ,, ,,	554	0	5
5th. ,, ,,	690	2	2
6th. ,, ,,	825	13	5
7th. ,, ,,	959	18	4
8th. ,, ,,	1092	6	5
9th. ,, ,,	1222	19	3
10th. ,, ,,	1351	14	7
11th. ,, ,,	1478	10	11

shewing that, in any interval from ten to twenty-one, there would have been the repayment, in the event of the child's death, of an amount exceeding *the whole of the premiums and charges for education;* and in the event of his living, either the refunding of all the premiums paid, £550, as a Capital wherewith to engage in business, or the guarantee of an Assurance

* [A repetition of deposits, of equal or lesser amounts, may safely be allowed *without fresh medical examination* or proof of unaltered good health, as the office would not by such deposits be in a worse position than if the party, at the commencement, had at once decided to undertake recurring payments to procure a large policy; and this recurrence of optional deposits may be allowed, without inquiry into the state of health, until the aggregate of the separate deposit policies is equal to the amount which a fixed annual payment of the deposit would have assured. The assurance society may well incur the possible chance of a deposit being brought for assurance just when the health is deteriorated, as it would not, on the average of its deposit business, be worse off than in the cases where the deterioration of health takes place in ordinary assurance policies.]

of £1478. 10*s*. 11*d*. increasing with every succeeding premium, if paid, and by the bonus divisions.

20.—If the Deposit system were adopted by Government through the Savings Banks, for small sums, it would become very general, as they have the machinery ready for receiving deposits, and the medical examination could easily be supplied. In Part II, we will enter upon this subject in relation to certain clauses in the new Savings Banks' Bill, expected to be introduced by the Chancellor of the Exchequer: but we would here draw attention to the fact, that through the agency of Savings Banks, premiums payable in small weekly payments from pennies upwards, might be received for the assurance of sums from £5 upwards, payable at death. The very large number of assurances thereby facilitated, would render medical testimony, or examination of the lives, no longer of primary importance, as is the case at present with ordinary assurances companies.

The Transfer, or Substitution, principle.

21.—To make the system complete, we propose another principle, which we denominate the *Transfer*.

If taken out for the whole of life, (but not otherwise), a Policy might be Transferable to some other life, at the death of which substituted life, in lieu of the original one, the amount assured should be paid; the successor thus standing, relative to the society, in the same position as his predecessor:—it being understood that the substituted life shall not be of greater age than the one in the policy at the time of Transfer, and also in perfect health. A small fee, of proportionate amount to the sum assured, for office trouble, &c. is all the charge that need be required for this permission; the Society having nothing to do with whatever arrangements the parties concerned in the transaction may choose to make between themselves.

22.—In the same manner, the privilege might also be

extended to the holders of policies of Endowment for Children, or Provision for old age; provided the said policies are effected on the returnable rates.

23.—This feature must be considered as furnishing a striking improvement in Life Assurance, as it removes one objection, which has hitherto existed;—viz. the necessity of either sacrificing afterwards at considerable loss, or of continuing, a policy, which is sought for merely temporary accommodation, and which, it may be, subsequently, on that account no longer desirable, or from the pressure of temporary pecuniary difficulty, convenient to keep up.

24.—Many illustrations of its efficacy might be given, but the following examples will, perhaps, suffice:—

1. Suppose a gentleman in the army, having effected an assurance upon his life in time of peace, to be required afterwards to enter upon remote or active service. If he wish to avoid an increase of premium, and be in the full confidence of his health, he may prefer at once to give his policy to a younger brother or friend, at the death of whom the amount assured would be paid; and yet he may retain to himself, by mutual agreement, some interest in the policy so transferred.

2. Suppose a creditor to have effected an assurance upon the life of a debtor, as collateral security for a loan, which is afterwards paid off, so that the creditor has no longer any interest in keeping up the policy; or, suppose a person to have borrowed money on mortgage from a private individual or a society, and to have assured his life, so as to secure his family from liability for the debt, in case of his decease before he has paid it off; in both these cases, the *Transfer* principle would be at once susceptible of advantageous application, as the power of transfering the assurances from their own to other lives, would allow of the policies becoming serviceable to other parties for similar commercial purposes; and the premiums paid by the original assurers would, thus,

not be entirely lost, when their desire to keep the policies up, for their own respective benefit, had ceased, as the assurers on the substituted lives would find it advantageous to pay an equitable sum for the transfer.

25.—If deposit policies were insured by the agency of Savings Banks, the Transfer privilege could easily be adopted. The party, whose life is to be substituted, being of not greater age, would attend at the Bank to be examined by a medical officer, appointed for that purpose, to whom he would pay a fixed small fee, and who would endorse on the back of the policy :—*The Life of* ——— *may be substituted in the within policy.* Whereupon the depositor would put his endorsement : — I *transfer this policy to the above-named* ——— .

The transfer principle would make a deposit policy as negotiable and transferable almost as a bank note ; for it would be—

1°. Paid up, and free from future charge.

2°. A certain portion of its amount would be withdrawable at short notice by the holder.

3°. Its full amount would be receivable by the holder, at the death of the life originally assured, or (if a transfer had occurred), of the substituted one.

The Substitution or Transfer could be renewed as often as the policy changed hands, if substitute and healthy lives could be found of not greater age. * The Society, or Savings Bank, would, clearly, be benefited by every fresh life being substituted after careful medical examination, as the vitality of the policies would thus be renewed. In ordinary assurances this is not the case. If once a life is accepted, and it subsequently deteriorate in health, the office cannot escape the risk, provided the payments be duly continued.

* In a separate publication, which will shortly appear, will be found Rules for the formation and government of Friendly Societies, or of Benefit Assurance and Investment Societies, embodying this and other principles.

The Half-premium System.

26.—In many modern offices a plan is adopted, thus expressed:—" Half the annual premium on whole life policies may be kept unpaid for the first seven years, provided 5 per cent. interest be paid in advance." This accommodation is, in many instances, a great convenience, both to persons whose means are likely to increase but who, temporarily, are unable to keep up the payments to the whole extent, and also specially in the case of policies in connection with mortgages, as, during the first seven years, (the term, perhaps, of a mortgage) the payments are nearly as moderate as in a short term or temporary policy, and, at the end of the period, if the policy be still required, it can be continued without renewed evidence of health still being good. It is to be understood, that, if, in the first seven years, the assured die, the balance of premiums in arrear would be deducted from the claim paid to the holders of the policy; and, if he survive the seven years, then, to keep up the policy, the original whole, or full, premium, would have to be paid for the future, whilst the arrears of the seven half premiums could either be liquidated at the close of the seven years, or stand over to be deducted from the policy at death, provided the assurer pay interest annually thereon, or agree to the accumulated amount of compound interest being deducted, with the arrears, when the death occurs. This system is now very generally in use; but we desire to caution the directors of companies against misconception of the advantages, which their institution may derive from it. They should understand that they cannot allow its application: —1st. unless the half premiums paid, added to the interest on the half premiums in arrear, exceed, on the average of seven years, the rate payable (see Table 3, page 52) for a seven years'-Term-policy. Hence, referring to Table 2, we see that assurers, on the *profit* scale of the society to which

those tables refer, alone should be allowed the half premium privilege.

27.—The principle would, of course, be most advantageous to high-rate societies, but not equally safe or desirable for one proceeding upon a system of low premiums. By Table 2, page 51, up to age 54, the system may be continued with but one limitation, that "Half the premiums are to be withheld only *for seven* years at interest, on the understanding that after that period, the whole premium shall be payable, with interest at 5 per cent. on the arrears until they are liquidated." As an example, let us refer to the case of a life, aged 25 next birth-day, effecting an assurance for £1000, on the profit rate of Table 2. His proper payment, (at £2 2*s.* per cent.) would be £21 a year, instead of which he is allowed, during the first seven years, to keep back half of each premium—viz. £10 10*s.*, provided he pay 10*s.* 6*d.* interest on each accruing arrear. He, thus, has a whole life policy with little more cost for the first seven years than a seven-years temporary policy by Table 3 would require; and to this is added the important option of continuing afterwards his policy for the whole of life, whatever be the deterioration in his health, encumbered, of course, with £73 10*s.* debt, bearing £3 13*s.* interest, until liquidated, or an allowance of *compound* interest, (instead of his paying interest annually) to be deducted at death with the £73 10*s.* when the claim is payable. For the 8th and subsequent payments he would revert, in addition, to the whole premium £21 a year. If the amount of arrears appear to the assurer to be heavy, he has to remember that in the past seven years, instead of £147 he has only paid £73 10*s.*, and whether he paid the amount due, or was accommodated with an advance (or permission to keep back premiums), his pecuniary position is the same.

28.—By way of caution, we would remark, that any Assurance society to be secure should, at least, receive from each member such a premium as, collectively, would pay current

claims and expenses, independently of affording reserves for the future; and, strictly speaking, the system is only advisable and safe for a young society, where it possesses a sufficiently large protective capital, and where the privilege is allowed for a limited term of years, as seven or less. For a company with a small paid up capital to permit a longer extension of the half premium assurances would be analogous to a society transacting the ordinary business, but investing the greater part of its money in unavailable securities.

As an axiom of finance the directors of an assurance society are bound to invest only a small proportion of their funds, as from time to time received, in securities not readily convertible into cash. So acknowledged is this, that it is customary for Actuaries to take care that the amount invested in the public funds shall always keep pace with that laid out on land-mortgages or other similar security.

29.—Theoretically, and on paper, it might be made to appear that not only half the premiums, but even a larger proportion might be withheld for more than seven years, with increased apparent advantage to the society, from the higher rate of interest, at which the money would seem to be laid out, than that credited to assurers in the tabular calculations; but the law of mortality is in operation all the time, and while the nominal assets of the society would appear to be in the most satisfactory condition, deaths would occur, and the actual available funds would not be sufficient to meet the claims to which they would give rise.

Such a business can, in fact, be only undertaken by young societies when they have a considerable paid up capital.

30.—One more remark in addition:—The half premium plan (although a convenience to the assured) does not give a young society all the advantage which it has a right to expect. It would only do so if 5 per cent. interest were the limit of the advantage that the directors could obtain from the investment of that portion of the society's funds,

which is not intended to be placed in immediately convertible securities. Such is, however, not the case. For every £100 invested on land mortgage or similar security, an additional policy of assurance can be obtained and a fresh source of profit created. A young society is therefore best off, when receiving the whole premiums upon its policies, and so enabled to lend out a portion to induce the effecting of new assurances. Of this benefit, however, it is deprived by consenting to the half premium system. Nevertheless, to meet the public requirements, we are of opinion that it should be adopted, with the limitations previously referred to.

31.—Other new features may be briefly enumerated:—

1. *Whole World* policies can be effected, upon which the assurer has not to pay any new extra rate, if he desire to go to any part of the world, however unhealthy. The question is treated as one of *average*, and a small *continued* per centage, only, is charged above the ordinary payments, in lieu of the *temporary* higher rate of premiums usually required in such cases.

2. *A diminution* of *half a year* may be made on the amount of premiums chargeable, when persons come for assurance within six months of their *last* birthday.

3. Policies are issued by one or two new companies with a covenant, that they shall be *Indisputable* (when once the first premium has been paid) whether obtained by fraudulent representations or not.

4. *Combination* assurances may be obtained, whereby the assurer can, simultaneously, assure the *life and honesty* of the assured, or against his becoming unexpectedly incapacitated by *accident* from earning his livelihood, or otherwise enjoying the use of human faculties.—*(See page 43.)*

On the Indisputability of Policies.

32.—Respecting the *Indisputability* of policies, we would remark, that the concurrent testimony of the leading managers of assurance offices is in support of the adoption of some more complete contract between the companies and their assurers, so as to make policies more marketable when held as security for loans, and more certain as family provision.

On this head, a careful writer, * Mr. James, remarks, that,—" In the proper estimate then to be taken by the assured party of the risk undertaken by an office, he must not fail to remember that, however scrupulous he be in the assertions he makes relative to his age, health, and habits, he has by far the most favourable position of the two interested in the contract. For a small sum paid down annually, and computed from the results of averaged and not of individual lives, he has the benefit of assurance of a comparatively large sum, payable at a moment, whether the event of his death be immediate or deferred. Nor as may be gathered from the stipulation already referred to, does his share of the responsibility end here. In making the preliminary arrangements, he is not only morally bound to observe that amount of good faith necessary to this as to any professional or commercial engagements, but he is *legally* and *absolutely* required to do so. The inviolability and strict performance of the contract on the part of the assured, and the receipt by his representatives of the promised benefit, wholly depend upon his own entire compliance with the principles of honour and candour. By a deviation from this course, how often have we seen innocent parties made severe sufferers by the folly of those who, when acting under improper or mistaken motives, have been thus the real means of entailing the most

* Treatise on Fire and Life Assurance, 1851.

serious misfortunes on their families, which but the commonest act of prudence or forethought might have wholly obviated. By an attempt to avoid a less evil, the greater one is created. Such is the facility now offered by all the respectable offices, that where undisguised statements of health are made, the payment of but a small extra premium is required, and an unconditional risk accepted, all right to open the question of existing disease or a tendency to its future presence, being waived by the assurers.

"In the transaction of all kinds of business, however trifling or important, there is one principle indispensably necessary to its safe and successful conduct, upon which, in fact, the whole system of our commercial relations must entirely depend; that principle, we need hardly remind our readers, is *an observance of good faith one with another.*

"The instances of disputed assurances to be found latterly in the records of our law courts convince us, however, that there is generally a lamentable and intentional neglect, on the part of assured persons, of that degree of confidence and good faith necessary to the inviolability of the mutual contract of assurance; and hence we see exhibited a most culpable disregard for the great moral and personal responsibility attached to the assured, and difficulties entailed by them upon their innocent and helpless survivors, which will, we trust, operate powerfully on the minds of the public, so as at once and completely to put an end to a course of conduct highly reprehensible and dangerous in the extreme; convinced, as all reasonable and honestly-disposed persons must be, that a fair and honourable explanation of all circumstances relative to the health and habits of persons proposing to make assurances on their lives, will be the best and only means of securing a profitable and indisputable result."

33.—Lord Mansfield, speaking of the parties on whom devolves the duty of ascertaining the state of the risk in life assurance, has given some heads for a rule in this matter:—" The

assured need not mention what the insurer takes upon himself the knowledge of, or what he waives being informed of: the insurer need not be told general topics of speculation;"—such as the nature of various climates as affecting the constitution and health of Europeans, the healthiness or unhealthiness of different trades or occupations, and the degree of risk attendant thereon from danger by accidents, or of the bad tendencies of particular courses of life.

With reference to matters coming within the knowledge only of assured persons, what is a fraudulent concealment or misrepresentation, depends simply on whether the matters were "material" to the consideration of the risk; this is a matter of fact to be ascertained by a jury: and if material, the consequence is a matter of law, and the policy is bad. This point has been ruled and carried into subsequent decisions. The materiality of the fact invalidates the contract; the knowledge of the fact by the person taking out the assurance, however (on another's life), not being material to influence the issue for trial.

The distinction between *misrepresentation* and *a non-compliance with warranty* is here defined by that eminent lawyer:—"Insurance is a contract upon speculation, and therefore the special facts, upon which the risk is to be computed, lie chiefly in the knowledge of the insured only. The insurer trusts in his statement, and proceeds upon confidence that he does not keep back any circumstances within his knowledge, to mislead the insurer into a belief that the circumstance does not exist. The keeping back, therefore, of such circumstances is a fraud, and the policy becomes invalid, although the suppression should happen through mistake, without any fraudulent intention, yet still the insurer is deceived, and the policy invalid, because the risk run is really different from the risk understood, and intended to be run at the time of the agreement.

"The question, therefore, must always be:—'Whether

there was, under all circumstances, at the time the policy was underwritten, a fair statement or a concealment—fraudulent if designed—or, though not designed, varying materially the object of the policy, and changing the risk understood to be run.'

"A representation is a statement of the case, not part of the written instrument, but collateral to it, and entirely independent of it; and it is sufficient that a representation be substantially performed.

"Even written instructions, if they were not inserted in the policy, are only representations; and in order to make them valid and binding as a *warranty*, it is absolutely necessary to make them a part of the instrument by which the contract of indemnity is effected. If a representation be false in any material point, it will annul the policy; and if the point be not material, the representation can hardly in any case be fraudulent."

There is no distinction better known to those who are at all conversant in the law of insurance, than that which exists between a *warranty* or condition which makes part of a written policy, and a representation of the state of the case. Where it is a part of the written policy, it must be performed.

It is now usual to insert in the policy the substance of the statements made by the assured, or to refer to the written proposals and statements of the assured, whereby they are made a part of the policy, and to the truth of which he makes an admission.

"If an assured person represents facts to the underwriter or insurer without knowing the truth, he *takes the risk upon himself* (by so representing).

"The great question is, whether the representation was false, and that, in a material instance. Fraud is found out by the materiality of the point. To make written instructions binding as a warranty, they must be inserted in the policy."

The contract is equally void whether the misrepresentations

were made on the part of the insured, or of his agent, or of any other party concerned in his behalf about the insurance. And it makes no difference that the loss depends on other circumstances than those which the misrepresentation or concealment concerns, the contract is void.

34.—The general impression is, that all offices would find it to their advantage to declare their policies *indisputable*, and to cover the risk of fraud, which is not of frequent occurrence at present, by an additional per centage on the premiums; as in most cases of past litigation, the public have manifested unfairly their opinion against the office, however just their grounds of dispute, and in favour of the family or representatives of the deceased policy-holder.

The declaration of indisputability might lead to a material increase in the assurance by timid, but honest persons, who at present unnecessarily fear that, in a policy, they may be leaving to their families a lawsuit for a legacy. On the other hand, in an actuarial point of view, the increased risk to the company in case of fraud, might easily be made a question of *average;* provided more details, than are now considered requisite, were demanded before treating as complete the chain of evidence upon which the directors are to found their decision as to the eligibility of a life. Under the present system, with all the vigilance exercised by careful managers, there is some natural reliance upon the probable veracity of the witnesses nominated by the life; and this reliance has existence more especially in the case of policies required with speed for mortgage transactions. The nature of the extra caution required cannot at once be defined; and the difficulty will lie more with country than with town proposals, from the non-appearance of the former before the Board of Directors at the head office, where the skill and experience of the officers might be of service in detecting unfavourable symptoms, which might escape a local adviser. With an augmentation in the risk, it is possible that a slight increase might arise in the expenses to the office upon

each transaction, through the necessity of obtaining some additional independent testimony as to the *past* habits of life of the proposed assured, as an adjunct to the special medical examination by the company's own officer in the locality. At present the medical examination refers mainly to the state of health at the time of the proposal. The private referees give evidence as to his *past* career: but the principle of indisputability appears to demand concurrent and independent testimony upon that head, which could, probably, be procured from some person of standing, residing in the same locality.

35.—The increased expense, from the necessity of extended machinery, and the augmented risk from possible deception without the subsequent power of disputing, could, we repeat, be provided for by an additional and properly adjusted small margin on the premiums. The tables of offices are at present so moderate when compared with the benefits granted, as to bear an addition without creating any sensible obstacles to assurers; and we do not hesitate to express our decided opinion, that a Proprietary office might well adopt, without delay, the principle of indisputability; for against the increased risk, can safely be placed the probable profits from additional business. The position of a Mutual society, in which all the members partake of any loss through fraud or other cause, would be somewhat different, unless it be sufficiently old to have accumulated a Reserve fund for contingencies. We believe that details would be obtained through increased investigation, and additional facts would be elicited through independent testimony, which, at present, friendship may lead a private referee to conceal; that these details might narrow the field of *acceptable* lives by suggesting hesitation in accepting them, is not likely, as, after all, the doctrine and practice of life assurance is essentially one of *average*, and the experience of offices discloses that *sound* lives will sometimes fail before their time, just as much as those which are considered doubtful.

The formidable objection, that the principle of indisputability may increase the disposition to fraud, can only be met, and it can in our opinion be met correctly, by viewing that contingency as one of great probability, and, as such, by giving to it its due estimation in fixing the degree of increase to the premiums, until a greater generality of adoption of the principle, and a more perfect system of evidence, subsequently proved the first increase to be in excess.

On the Mortality of Sound Lives.

36.—In the practice of life assurance, one element exists of more importance than would be imagined. It is the *tendency* of persons in *sound* health, and endowed with excellent constitutions, to expose themselves to premature decease, by imprudence and reckless neglect of ordinary caution in avoiding causes of illness and death. It is worthy of notice, that while the directors of assurance companies usually decline proposers whose constitution is imperfect, or entire organs are not unimpaired, yet they congratulate themselves on the accession of all assurers for whom the medical adviser will give a report of their being good lives. By this circumstance, the number of assurable lives is greatly contracted, and many persons, who, in the long run, do not die before their time, are debarred from the benefits of life assurance. So restricted a system is unnecessary, for, if a scale of increased rates were deduced from observations of an extensive average of each disease, and applied by a skilful medical officer as a guide in each particular case, then a large number of apparently impaired lives, we believe, might be assured, who would be found to yield a return less productive of loss to the society, than a similar number of strong persons (assured at the ordinary rates), whose self-security in the possession of health renders them indifferent and careless of precautions. The old saying, of "a creaking door lasting longer on its hinges," is, by the experience of assurance companies, found to be too true.

Taking for instance the claims that have arisen in the course of the last ten years in one successful company, the proportion of deaths from imprudence and accident to those from natural causes, is as 1 to 2, all being accepted as sound and excellent lives. A few of the causes of death may be mentioned:

1. The life of a young gentleman of fortune, and a magistrate for the county, residing upon his estate in Cornwall, was assured as one of three in a lease for £1000; his age was twenty-six, and the medical opinion was to the effect that he was a first-class life; two years after the policy was issued, he caught cold in consequence of having neglected to change his wet clothes after returning from grouse shooting, and he died, after an illness of but few weeks. The premiums paid were £42, and the policy was £1000.

2. Another fell into his tanpit and was drowned three years after insuring his life for £800. The widow and children then received a provision, which had only cost £71 8*s*.

3. A young nobleman insured his life for upwards of £30,000 in various offices, by way of marriage settlement in case he should pre-decease his father. He died within two years of rheumatic fever in consequence of exposure to cold.

The experience of most assurance societies furnishes similar sad records of the uncertainty of human life. Mr. F. G. Smith, in an interesting pamphlet on the subject, narrates the following instances of premature decease, where life assurance had been of benefit:—

1. An eminent tradesman in Cheapside, who makes it imperative upon each of his numerous shopmen and clerks to insure his life to a small amount, some time since induced a neighbouring friend to effect an assurance for £2000—this friend *died within the first year* from typhus fever, and his widow was thus put in possession of £2000.

2. A young married man, in the medical profession, opened a chemist's shop in the suburbs of London, and was induced by his wife's friends to insure his life for £1000; shortly after this, the cholera made its appearance in the metropolis, and the party in question fell a victim to that disease. The assets of the deceased were little more than sufficient to pay his creditors, and had it not

been for the insurance on his life, his widow would have been left destitute; as it was, however, she received from the office £1000.

3. A farmer, residing about ninety miles from London, having, by some accident, had his attention drawn to the subject of life insurance, one market day made a proposal for an insurance of £500 on his life, which, after the usual inquiries had been made, was accepted, and the insurance was effected. Singular to relate, during the carrying of the next harvest home, he was precipitated from one of his own waggons, by the horses starting forward while loading, and killed on the spot. His widow received £500, which enabled her to carry on the farm.

4. A young man having contracted marriage at the age of twenty-five, very prudently insured his life for £1000. At the age of twenty-nine he was unfortunately drowned in the endeavour to save his brother from a watery grave. In this case four annual premiums had been paid, which, according to the rates of the office concerned, amounted in all to £80, and his widow received £1000.

5. The life of a lady, within a few weeks of her confinement, was recently insured in an office in London for £5000; and she dying in childbed, the insurance company had to pay the above sum, having received only one premium.

6. A gentleman, reported in excellent health, belonging to one of the liberal professions, took out a policy of assurance for £1500 on his own life; and having taken a severe cold, ruptured a blood-vessel during a paroxysm of coughing. This occurred after two annual payments only had been made, and his family, of course, received £1500.

7. A gentleman having made a proposal for an insurance on his life for a considerable sum—and which the company, considering quite unexceptionable, readily accepted—called at the office, and paid the first year's premium; but, after completing the transaction, he had scarcely crossed the threshold of the door, ere he was seized with apoplexy, and almost instantly expired.

37.—We do not say that we would go the whole length of advocating the acceptance of *diseased lives* in the present limited extent of assurance transactions, and in the absence of any sufficient data, as yet, to serve as a guide in such cases;

yet, we recommend to directors the re-consideration of that numerous class of proposers, whose state of health and occupations have subjected them to be denominated *delicate*. A slight margin on the tables usual for healthy assurers would render them productive of less loss and more profit than a similar number of robust lives; because they are less likely, if taken to a sufficiently large extent, to give rise to such aberrations from that law of mortality, assumed as true for them, as the latter class do. While delicate, or slightly impaired, lives would be gradually and slowly failing from the waste of their faculties in the course of that average of years, for which the charge of premiums would provide, the hardy and robust would present numerous cases of premature death from fever and inflammatory causes, generally induced by too good living; too free indulgence (perhaps, not habitually) in the juice of the grape, or fermented liquors;—from accidents attending manly sports and amusements;—from careless neglect of removing wet clothes, as in the case of the young magistrate who died after grouse shooting;—from sudden change from heated ballrooms to the cold out of doors air, without sufficient additional clothing;—from damp feet;—from overstraining by feats of strength, and by numerous other apparently trivial causes, whereby the strong man, confiding and daring in his strength, is so soon laid low. We urge, therefore, that the field of assurance should no longer be limited; that, inasmuch as life assurance is merely the result of judicious money-measurement of the contingencies of human existence, the system may safely be extended; that attempts should be made to determine a proper charge for the general assurance of lives, however apparently they may have departed from the assumed standard of average good health. If this were done, we should cease to meet with aged persons, who tell us of their having been declined by such and such an office when young; whilst, on the other hand, this and similar publications of the actual experience of

assurance companies in respect to premature decease among *sound* lives, may probably induce fathers and husbands to lose no time in coming forward and purchasing, while their health permits it, the benefits of assurance for their families.

On Life and Fidelity Assurance.

38.—Of our principle, for *combining Life and Fidelity Assurance in one policy,* we would remark, (in the words used in the Treatise on Industrial Investment) that the rates of contribution for Fidelity assurance may be ascertained from statistical data, which can be rendered as complete as the corresponding data representing the laws of mortality; and it is plain that the payments of an assurer might be so combined, that the amount of a share could be made payable, at the end of the given number of years, to himself or his family (*as in an ordinary life assurance policy*), if he continued honest; at the same time that it might be made payable to his employer for the time being, in case he should, in the mean time, commit a breach of trust; in which latter case he himself would forfeit all claim upon the society.

Simple guarantee societies have been established within the last few years solely to obviate the defects of suretyship by private bondsmen, a practice which was found to be attended with various inconveniences and objections;—instances having constantly occurred in which persons of great respectability were obliged to forego excellent situations, from either the great difficulty of obtaining security, or a repugnance to place their relatives or friends under the obligations involved therein. A Fidelity society, commonly called a Guarantee society, undertakes, on the annual payment of a small sum, to make good, in case of default by fraud or dishonesty, any losses which may be sustained to an amount specifically agreed upon; and, by such means, obviates the necessity for private sureties, as well as the obligations arising therefrom, which often prove as prejudicial to the best interests of the employers as to the employed.

To the employer the guarantee of such a society is much more valuable than the bond of any individual, inasmuch as it is not liable either to doubt or depreciation. In large establishments, both public and private, where the securities are numerous and the sureties often resident in many different parts of the country, and known only by repute, it becomes almost impossible to watch over their continued existence and solvency; and cases of default have frequently occurred when, upon investigation, it has been found that all the sureties have been dead or gone away for many years.

By these means, security has been provided only for the fidelity of the employed; but the plan of a Guarantee society is still defective, in consequence of its being considered virtually not to offer a sufficient discouragement to dishonesty. It has been felt that a pure fidelity policy, does not, even in point of morality, possess the advantage afforded by private suretyship, inasmuch as the son, to whose nature it would be repugnant, by his misconduct, to bring disgrace and ruin upon his relations or friends, might feel little anxiety as to the pecuniary loss inflicted upon a guarantee society. In other words, it is conceived that a disposition to fraud is not effectually checked,—the reflection arising, that as the rates of a guarantee society pre-suppose the existence of such a disposition on the part of, at least, one out of every two hundred of its selected assurers, the loss sustained by the society through such defalcation would be but the result of the "*average*."

In the Combination plan suggested, which would be equally applicable, if not more so, to a Life assurance or other Investment society, the subscribers, while satisfying the requirements of their employers in respect to their honesty and good conduct, would receive an additional stimulus from the reflection, that all their subscriptions would become forfeited in the event of their acting dishonestly. Hence, the greatest moral benefits might be expected, as the members of such an association would serve as a mutual check on each other. A new incen-

tive to honesty would be gained; and while a sum of money would guarantee the fidelity of the invester, the mere fact of his admissibility to such an assurance would be a strong testimony to his character. At the same time various practical regulations would, of course, be requisite to secure the judicious working of this suggestion.

On Industrial Assurance.

39.—A sound practical writer on Life assurance, Mr. Bridges, remarks, that "A beneficial system for the poor labourer, whether in the church or the factory, would be obviously to receive from him a weekly or monthly premium, at the rate involving a share of profits, but, in lieu of such profits being assigned in bonuses, to accumulate the bonus fund, to meet the payment of premiums whenever the assurer, either from want of employment or sudden and unforeseen call on his resources, is himself unable to do so. And to make such payments of simple and inexpensive collection, and to facilitate accountantship, they should be fixed premiums of say one shilling, or any multiple of one shilling, per week, whatever the age at entry, each shilling securing at death, or at an advanced period of life, an amount varying with the entrance age. 'A groat a-day,' says Franklin, 'is the interest of £100 for one year:' so a groat a-day is the premium, at age 30, to secure twice a hundred pounds to a widow and family on the decease of the contributor, with a margin to eke out his payments, in case of sickness, accident, or misfortune, rendering him incapable of continuing the burden. In the hands of a paternal government, life assurance on such a basis might be made a national duty. And while every one may well exclaim against a tax upon the act of insurance itself (in the case of *fire* insurance, the tax is 200 per cent.) as a disgrace to the legislation of the nineteenth century, we believe that a graduated insurance tax to do away, in the next generation, with nine-tenths of the genteel pauperism we see around us, would

be much more willingly paid than any of those now pressing on us to meet the interest, never ending, still beginning, of the cost of Blenheim and Waterloo."

40.—The following are other instances where life assurance is peculiarly applicable :—

1. To husbands and fathers, to ensure a provision, after their death, for their wives and children. (Tables 1, 2, 3, 4, pages 51 and 52.)
2. To young men, to make a provision for *their old age* by the purchase of deferred annuities.
3. To parents, to ensure certain sums payable on their children *attaining* the age of 14 or 21, or at other ages, whereby the ready means for *starting them in life* may be obtained by a much smaller annual saving, than would be necessary were they to attempt to realize the the same sum by putting it in any other species of investment. Assurance companies charging a smaller sum as they take into account the chance of the child's dying before attaining the specified age. This kind of assurance is called an endowment, and can be effected by one single payment, or by a series of annual payments, or premiums, to be made until the child attains the specified age.
4. To partners in firms, *who, by assuring their joint lives on Table 4, page 52, can secure a sum payable at the death of the* first, *which will enable the surviving partner to pay off the claims of the* Widow *of the deceased upon the firm.*
5. To Minors, the guardians or friends of a person, who, at a certain age will come into the possession of property, may obtain a security for advances made in the interim, by insuring his life until he shall arrive at the given age.
6. In the case of post obits, persons having issued *post obit*

bonds may realize their amount at the time they become payable, by insuring the life or lives on whose failure they become due.

7. To secure *the return of advances made for* educating *and* establishing *the younger members of a family in the world; this is effected by assuring the life of a child educated, so that, should it die young, the parent may recover from an assurance company the money spent upon it; if it live, there is a policy of a certain standing on its life, which may be continued in the usual way, and as it was begun at an early age, the annual premium would be small.*
8. To creditors, who, by assuring the amount due to them, can by a trifling outlay, secure a compensation for the loss which the death of their debtors might occasion; and by the principle in a preceding article (9, p. 12) the policy would be fully secured.
9. To borrowers, to provide, in case of death, a sum to repay a loan. This is the usual way in which money is now borrowed on personal security. The borrower, say of £500, assures his life for £1000, and gives personal security, in the shape of three joint sureties with himself, for the repayment of the principal and the due payment annually of the interest at £5 per cent. on the money borrowed, with the premiums of the assurance.
10. To possessors of entailed estates, *who can bequeath provisions for the younger members of their families, by assuring suitable amounts on their own lives.* This is applicable to the nobleman who would preserve his domain unbroken for his immediate heir, and yet provide for the younger branches of his family by a proportionate economy in his establishment; thus remedying, in one respect, the effects of the law of entail. Many *noblemen and gentlemen of large hereditary estates* have become insured in one office or other with this view,

and some adopt the salutary rule of making *an additional insurance upon the birth of every child.* To persons of rank who make a reserve from their revenue as a future provision for their dependants, life insurance is very useful, if only upon the consideration that it produces an effectual improvement of their money, which they are unlikely to accomplish so well themselves.

11. To the expectants of property in reversion, to secure a portion, at least, to their families, should they die before they enter themselves into possession. (See *Table* 5.) This contingency being one of *survivorship* only, the payments required would be but small. For example:—A gentleman, aged thirty-five, entitled to property should he survive another, aged sixty-five, can assure £1000 by a payment of £15 10*s.* a year, receivable by his family should he die before the older life.

12. To parties who expect to receive sums of money should they live over a *certain* number of years, as for example:—A person aged thirty, is entitled to a share amounting to £1000 in the *renewal fine of a lease*, which is payable at the expiration of three years from the present time. This share he would lose, should he die within that period. To secure his family against that loss, he has only to take out a *temporary* policy of assurance on his life for the three years, and by the trifling annual payment of £12 he assures the £1000; so that, should he die before the end of the three years, the office pays his family the £1000, and should he live, he will come into his share of the fine, the amount of which he will, however, have rendered safe from loss by his death, by an outlay of £36 altogether. (See *Table* 3.)

13. To parties having shares in Building societies *upon which they have obtained loans. Example:—A young man borrows £300 from a building society, to be repaid by monthly instalments dur[illegible] the rate of, say*

£42 a year. The money borrowed is invested in the purchase of a house, which is mortgaged to the society as security until the loan is repaid. Now, if this man die before the ten years are expired, unless his family can continue to pay the monthly instalments, the house will be seized for the remainder of the debt unpaid. It is obvious, then, that the borrower ought to take out a policy of assurance on his own life, so that his family may have, in the case of his death, wherewith to pay off the loan. He can effect this object with great facility, according to plans explained with the Benefit Building society *tables* (page 55).

14. The holder of a lease, which is renewable on payment of a certain fine, can, by a trifling annual payment, assure the necessary sum. Leaseholders *on lives* are specially interested in the very secure and advantageous manner, by which they can effect assurances, which will provide for the *renewal fines* in their leases, whether such leases are for *terms certain*, or contingent on the existence of *one, two,* or *three lives.*

In leases depending on lives, on the failure of a life, the lease can generally be renewed by putting in another life, for which privilege a *fine* is demanded. From the uncertainty of human life, the lessee is exposed to be called upon for such payment, before, perhaps, he is prepared to meet it (the death having occurred before he has put by the amount of the fine); this circumstance has often produced serious loss to the lessee, and in general there is no safer way to provide the money for the *fine,* than by a policy of assurance, effected for the suitable amount to be received at the death of the *first* or *last* of the lives, according as the case may be. Example: —The holder of a lease would have to pay a fine of £100, to renew it at the death of the *first* of two lives aged (say) fifteen and thirty-five. He provides for its

payment by an annual premium (on the Profit scale) of £3 11*s*. 11*d*., so that, should any one of the lives in the lease die even the day after the first premium has been paid, he will receive from the assurance society £100. (See *Table* 4, page 52.)

The above has reference to the *renewal* of leases, but in cases, where the lessee purposes to allow his lease to *run out*, and is, nevertheless, desirous of having at the death of the *last* of the lives, a sum of money, which shall be of the same value to him as his lease was; all that he has to do is to effect an assurance for the necessary sum to be received, when all the lives in the lease in question are dead.

If the lease be on *three* lives the annual premium per cent. would be very trifling. Example:—£100 can be assured payable at the death of the *last* of three lives, aged, say, thirty-one, thirty-seven, and sixty-one, respectively, by the annual payment of £1 5*s*. 6*d*.—In younger lives the premiums would of course be less.

15. In most copyhold properties, on the death of the tenant, his successor cannot be admitted except on payment of a fine. In many instances, the sudden death of the tenant has put his successor to great difficulty in procuring the required sum:—an assurance effected on the life of the tenant, by himself or his successor, would provide for this difficulty, and by a small annual outlay. (See *Tables* 1 *and* 2, page 51.)

16. In cases of marriage settlement Life assurance may also be particularly advantageous.—Suppose a gentleman, twenty-six years of age next birth-day, be engaged to a lady whose fortune is £3500, and that the whole be required to be settled on her at their marriage, as a provision for herself and children after his death, at the same time, that it is deemed advantageous to give the husband the use of a portion of the money to promote his

profession or business. Let £1000 be vested in trustees, and with the annual interest at 5 per cent. let them insure £2500 on the life of the husband. The remaining £2500 can be then placed at his command at once, as, at his death, his wife will still come into possession of £3500. (See *Tables* 1 *and* 2.)

41.—*The following Tables will serve as Illustrations of the Subject.*

TABLE I.

ANNUAL PREMIUM *for* ASSURING £100 *on a Single Life, for the whole continuance thereof, without Profits.*

Age next Birth-day.	Premium.			Age next Birth-day.	Premium.		
	£.	s.	d.		£.	s.	d.
16	1	11	2	39	2	17	8
17	1	11	11	40	2	19	6
18	1	12	7	41	3	1	4
19	1	13	5	42	3	3	1
20	1	14	2	43	3	5	0
21	1	15	0	44	3	7	0
22	1	15	11	45	3	9	1
23	1	16	10	46	3	11	5
24	1	17	10	47	3	13	11
25	1	18	11	48	3	16	8
26	2	0	0	49	3	19	9
27	2	1	3	50	4	3	3
28	2	2	5	51	4	7	1
29	2	3	7	52	4	11	3
30	2	4	8	53	4	15	7
31	2	5	9	54	5	0	3
32	2	6	11	55	5	5	4
33	2	8	3	56	5	10	9
34	2	9	7	57	5	16	8
35*	2	11	0	58	6	2	10
36	2	12	7	59	6	9	1
37	2	14	3	60	6	15	3
38	2	15	11				

TABLE II.

ANNUAL PREMIUM *for* ASSURING *£100 on a Single Life, for the whole continuance thereof, with Profits.*

Age next Birth-day.	Premium.			Age next Birth-day.	Premium.		
	£.	s.	d.		£.	s.	d.
16	1	13	7	39	3	2	4
17	1	14	4	40	3	4	3
18	1	15	1	41	3	6	3
19	1	15	11	42	3	8	2
20	1	16	10	43	3	10	2
21	1	17	9	44	3	12	4
22	1	18	8	45	3	14	8
23	1	19	9	46	3	17	2
24	2	0	10	47	3	19	10
25	2	2	0	48	4	2	10
26	2	3	2	49	4	6	3
27	2	4	5	50	4	10	0
28	2	5	9	51	4	14	2
29	2	7	0	52	4	18	8
30	2	8	2	53	5	3	4
31	2	9	5	54	5	8	5
32	2	10	8	55	5	13	11
33	2	12	0	56	5	19	10
34	2	13	6	57	6	6	2
35†	2	15	1	58	6	12	11
36	2	16	9	59	6	19	8
37	2	18	6	60	7	6	4
38	3	0	5				

* EXAMPLE :—A person whose age is 35 next birth-day may assure the FIXED sum of £100, to be paid at his death, by an annual payment during his life of £2. 11*s*. 0*d*.

† EXAMPLE : A person whose age is 35 next birth-day, may assure £100 with the profits that shall accrue, to be paid at his death, by an annual payment during his life of £2 15*s*. 1*d*.

TABLE III.

Annual Premiums *for* Assuring £100. *on a Single Life for One Year and for Seven Years.*

Age next Birth-day.	Premium One Year.	Premium Seven Years.	Age next Birth-day.	Premium One Year	Premium Seven Years.	Age next Birth-day.	Premium One Year	Premium Seven Years.
	£. s. d.	£. s. d.		£. s. d.	£. s. d.		£. s. d.	£. s. d.
17	0 17 1	0 18 4	32	1 4 11	1 6 10	47	1 17 1	2 0 0
18	0 17 6	0 18 10	33	1 5 7	1 7 7	48	1 18 1	2 1 6
19	0 17 11	0 19 3	34	1 6 3	1 8 4	49	1 19 1	2 3 4
20	0 18 5	0 19 9	35	1 7 0	1 9 1	50	2 0 2	2 5 8
21	0 18 10	1 0 3	36	1 7 8	1 9 10	51	2 1 6	2 8 4
22	0 19 4	1 0 9	37	1 8 5	1 10 8	52	2 3 0	2 11 4
23	0 19 10	1 1 4	38	1 9 2	1 11 5	53	2 4 10	2 14 10
24	1 0 4	1 1 10	39	1 10 0	1 12 4	54	2 7 2	2 18 8
25	1 0 10	1 2 5	40*	1 10 9	1 13 2	55	2 10 2	3 2 11
26	1 1 5	1 3 0	41	1 11 7	1 14 1	56	2 14 0	3 7 7
27	1 1 11	1 3 7	42	1 12 5	1 15 0	57	2 18 10	3 12 5
28	1 2 6	1 4 3	43	1 13 4	1 15 11	58	3 3 3	3 17 10
29	1 3 1	1 4 10	44	1 14 2	1 16 11	59	3 8 0	4 3 8
30	1 3 8	1 5 6	45	1 15 2	1 17 11	60	3 13 2	4 9 11
31	1 4 4	1 6 2	46	1 16 1	1 18 11			

* Example:—A person whose age is 40 next birth-day, may assure £100 for one year, by the payment of £1. 10*s*. 9*d*.; and for seven years, by annual payments of £1. 13*s*. 2*d*.

TABLE IV.

Annual Premiums *payable during the Joint Lives of Two Persons, for* Assuring £100, *to be paid on the Death which shall first happen of the said Two Lives, with Profits.*

Ages.		Premium.	Ages.		Premium.	Ages.		Premiums.
		£. s. d.			£. s. d.			£. s. d.
15	15	2 13 1	*25	25	3 7 1	35	60	8 10 1
..	20	2 16 2	..	30	3 12 0	40	40	5 0 7
..	25	3 0 6	..	35	3 17 8	..	45	5 8 3
..	30	3 5 10	..	40	4 5 7	..	50	6 1 1
..	35	3 11 11	..	45	4 14 8	..	55	7 3 4
..	40	4 0 4	..	50	5 8 10	..	60	8 14 8
..	45	4 9 9	..	55	6 12 1	45	45	5 14 11
..	50	5 4 4	..	60	8 4 0	..	50	6 6 10
..	55	6 7 9	30	30	3 16 8	..	55	7 8 2
..	60	7 19 10	..	35	4 1 11	..	60	8 18 7
20	20	2 19 0	..	40	4 9 7	50	50	6 17 7
..	25	3 3 2	..	45	4 18 4	..	55	7 17 11
..	30	3 8 4	..	50	5 12 4	..	60	9 7 3
..	35	3 14 3	..	55	6 15 5	55	55	8 17 3
..	40	4 2 6	..	60	8 7 3	..	60	10 5 9
..	45	4 11 9	35	35	4 6 9	60	60	11 13 7
..	50	5 6 2	..	40	4 13 11			
..	55	6 9 5	..	45	5 2 3			
..	60	8 1 5	..	50	5 15 8			
			..	55	6 18 5			

* Example:—£100, together with the profits accruing, may be Assured [illegible] the death of EITHER of two persons, aged 25 and 30 [illegible]yment of £3. 12*s*. 0*d*.

SURVIVORSHIPS.—TABLE V.

ANNUAL PREMIUMS *payable during the Joint Lives of Two Persons,* A *and* B, *for an* ASSURANCE *of £100, payable on the death of* A, *provided* B *shall be then living, without profits.*

Age of A.	Age of B.	Annual Premium £.	s.	d.
15	10	1	6	6
..	15	1	5	10
..	20	1	5	1
..	25	1	4	4
..	30	1	3	7
..	35	1	2	10
..	40	1	2	2
..	45	1	1	6
..	50	1	0	10
..	55	1	0	2
..	60	0	19	5
..	65	0	18	9
..	70	0	18	2
..	75	0	17	7
..	80	0	17	1
20	10	1	10	1
..	15	1	9	5
..	20	1	8	7
..	25	1	7	8
..	30	1	6	9
..	35	1	5	10
..	40	1	4	11
..	45	1	4	1
..	50	1	3	2
..	55	1	2	4
..	60	1	1	6
..	65	1	0	8
..	70	0	19	9
..	75	0	19	0
..	80	0	18	3
25	10	1	14	10
..	15	1	14	2
..	20	1	13	4
...	25	1	12	4
..	30	1	11	2
...	35	1	10	0
...	40	1	8	10
..	45	1	7	8
..	50	1	6	8
..	55	1	5	8
..	60	1	4	9
..	65	1	3	10

Age of A.	Age of B.	Annual Premium £.	s.	d.
25	70	1	2	9
..	75	1	1	9
..	80	1	0	10
30	10	2	0	7
..	15	1	19	11
..	20	1	19	1
..	25	1	18	0
..	30	1	16	9
..	35	1	15	3
..	40	1	13	10
...	45	1	12	4
..	50	1	10	11
..	55	1	9	8
..	60	1	8	7
..	65	1	7	7
..	70	1	6	8
..	75	1	5	8
..	80	1	4	9
35	10	2	6	10
..	15	2	6	3
..	20	2	5	5
..	25	2	4	4
..	30	2	3	1
..	35	2	1	5
..	40	1	19	6
..	45	1	17	7
..	50	1	15	8
..	55	1	13	9
..	60	1	12	3
..	65	1	11	0
..	70	1	9	9
..	75	1	8	7
..	80	1	7	4
40	10	2	15	3
..	15	2	14	8
..	20	2	13	11
..	25	2	12	11
..	30	2	11	7
..	35	2	9	11
..	40	2	7	9
..	45	2	5	4

Age of A.	Age of B.	Annual Premium £.	s.	d.
40	50	2	2	9
..	55	2	0	3
..	60	1	18	0
..	65	1	16	3
..	70	1	14	9
..	75	1	13	6
..	80	1	12	8
45	10	3	4	9
..	15	3	4	1
..	20	3	3	4
..	25	3	2	5
..	30	3	1	2
..	35	2	19	6
..	40	2	17	3
..	45	2	14	4
..	50	2	11	0
..	55	2	7	6
..	60	2	4	1
..	65	2	1	0
..	70	1	18	3
..	75	1	16	0
..	80	1	14	5
50	10	3	18	10
..	15	3	18	2
..	20	3	17	6
..	25	3	16	7
..	30	3	15	6
..	35	3	13	11
..	40	3	11	9
..	45	3	8	9
..	50	3	4	10
..	55	3	0	5
..	60	2	15	11
..	65	2	11	4
..	70	2	6	9
..	75	2	2	9
..	80	1	19	2
55	10	5	1	2
..	15	5	0	6
..	20	4	19	10
..	25	4	19	0

Age of A.	Age of B.	Annual Premium £.	s.	d.
55	30	4	18	0
..	35	4	16	9
..	40	4	14	9
..	45	4	12	0
..	50	4	8	1
..	55	4	3	2
..	60	3	17	10
..	65	3	12	6
..	70	3	6	7
..	75	3	1	4
..	80	2	16	7
60	10	6	11	5
..	15	6	10	10
..	20	6	10	2
..	25	6	9	4
..	30	6	8	6
..	35	6	7	6
..	40	6	5	11
..	45	6	3	6
..	50	5	19	7
..	55	5	14	9
..	60	5	9	2
..	65	5	3	0
..	70	4	16	6
..	75	4	10	7
..	80	4	5	7
65	10	8	4	3
..	15	8	3	8
..	20	8	3	0
..	25	8	2	2
..	30	8	1	4
..	35	8	0	4
..	40	7	19	1
..	45	7	17	1
..	50	7	13	4
..	55	7	8	0
..	60	7	1	10
..	65	6	14	5
..	70	6	5	3
..	75	5	16	8
..	80	5	8	5

* EXAMPLE:—The sum of £100 may be assured, payable on the death of a person aged 30 next birth-day, provided a party aged 50 last birth-day shall survive him, by the payment of £1. 10s. 11d. annually, only so long as both Lives shall continue.

By means of this Table, a person having a contingent life interest, depending on survivorship, may secure the certain benefit *of it to his family*, by a small annual payment.

42.—*Amount of immediate annuity granted for every £100 paid down.*

TABLE VI.

Age LAST Birth-day.	Annuity.			Age LAST Birth-day.	Annuity.			Age LAST Birth-day.	Annuity.		
	£.	s.	d.		£.	s.	d.		£.	s.	d.
20	4	18	7	51	6	19	4	66	10	15	8
25	5	1	11	52	7	2	3	67	11	4	3
30	5	6	2	53	7	5	7	68	11	13	7
35	5	11	3	54	7	8	11	69	12	3	9
40	5	17	4	55	7	12	9	70	13	6	3
41	5	18	9	56	7	16	7	71	13	18	2
42	6	0	3	57	8	0	10	72	14	11	0
43	6	1	10	58	8	5	3	73	15	4	11
44	6	3	5	59	8	10	0	74	15	19	4
45	6	5	3	60	8	15	1	75	16	14	10
46	6	7	3	61	9	0	8	76	17	12	1
47	6	9	4	62	9	6	9	77	18	10	0
48	6	11	7	63	9	13	3	78	19	8	0
49	6	13	11	64	10	0	2	79	20	6	3
50	6	16	6	65	10	7	8	80 &upwards	21	4	6

The following advantages can be offered to purchasers of annuities.

1. The annuities to be payable in two equal half-yearly sums, the first payment being made to the annuitant at *the end of six months* after the purchase of the annuity.
2. A person, purchasing an annuity and whose age is more than six months from his *last* birth-day, can receive an annuity equal to the mean between the rates granted at his age *last* birth-day and *next* birth-day respectively.

43.—Many persons are averse to purchasing annuities, because, according to the *old system,* the money once invested in a company was *sunk for ever.* Two other improvements can be adopted; viz:—

1. Should the purchaser, after three years have elapsed from the date of his annuity, desire to *obtain a loan,*

for temporary purposes, the Directors can at any time make him an advance on the security of the annuity-deed, deposited in the hands of the society until the loan is re-paid; an assurance for the requisite amount being effected on the life.

2. Or:—If, from a change of circumstances, the purchaser, after three years have elapsed, desire to *dispose of the annuity*, the society can re-purchase it of him on equitable terms, determined by the length of time the annuity has been in existence, and the state of health of the annuitant, at the time the annuity is offered for sale to the society.

Assurance for Borrowers in Building Societies.

44.—*The attention of shareholders in* Benefit Building societies and Freehold land societies, *should be turned to the plans of assurance, which are peculiarly applicable to the circumstances of those who have therein obtained loans.*

The high estimation in which *Benefit Building Societies* are now held by the industrious and provident public, and the very great number of persons who avail themselves of them for the purpose of borrowing sufficient money to complete the purchase of a house, or other similar investment, render it desirable that every means should be provided to secure the families of the borrowers from the inconvenience and loss, that would arise from their sudden death; since it is obvious, that although a man may during his life be able, with ease, to pay the monthly or quarterly instalments necessary for the liquidation of his debt, yet, should he die before the house is free from the mortgage, his family would, in most cases, find it a very heavy burden to continue the payments, without which the house would, probably, be sold at considerable loss.

Now, although it is certain that some Building societies will not be able, consistently with the Act of Parliament, to

terminate within the period specified in their prospectus, in consequence of the shares not having attained the necessary value; yet there can be little doubt that a society whose payments are regulated by the strict mathematical principles of interest, and whose affairs are managed with judgment, would not only be likely to close in the calculated time, but would probably, from the profits arising from fines and other sources, be in a position to terminate sooner.

With a view, therefore, to give the Borrower in a Building society the means of securing his family, by a comparatively small annual outlay, from the pressure of the debt, in case of his premature decease:—*Temporary policies of assurance can be effected on the life of the borrower, in amount equal to the loan, and for the number of years it has to run. Upon this principle, that, at the end of each year, the assurer shall be allowed to drop so much of his policy as is equivalent to the portion of the debt cleared off in the year, and pay, consequently, each year, a diminishing premium; with the further advantage that, at the end of each year, a portion of the premiums, which have been paid on the dropped part of the policy (consistent with the risk incurred), shall be returned to the assurer.*

By a policy of this nature, the family of a borrower would always be sure of receiving from the society in case of his death, a sum in *ready money* which would suffice to pay off the remainder of the debt.

SPECIMEN OF RATES.

Annual premiums to assure £100 by a temporary policy.

Age.	For One Year.	Seven Years.	Ten Years.	Fourteen Years.
	£. s. d.	*£. s. d.*	*£. s. d.*	*£. s. d.*
20	0 18 5	0 19 9	1 1 3	1 2 7
30	1 3 8	1 5 6	1 6 8	1 9 6
40	1 10 9	1 13 2	1 16 7	1 18 10

45.—*In some cases,* especially in the latter years of the existence of a Benefit Building society, the family of the borrower might possibly find the society unwilling to allow them to pay off the remainder of the mortgage, by a single sum, in consequence of the probable difficulty the building society would experience in obtaining a reinvestment for the money at the rate of interest supposed in their calculations. Should that be likely, another policy is recommended, *by which, in consideration of a fixed diminishing annual premium paid by the borrower,* the life assurance society *will undertake to pay (should he die prematurely) the monthly instalments, for which the house or property is liable, until the mortgage be cleared off.* This policy, called the Guarantee Temporary Annuity Policy, presents peculiar advantages, as it affords additional security to the Building society, and at the same time renders the family of the borrower entirely free from liability.

SPECIMEN OF TABLES.

Guarantee Policy for fourteen years, by which an annuity of £6. a-year, or 10*s.* a month is purchased, payable from the time of the death of the Assured, until the expiration of the fourteen years.

Diminshing Annual Premiums.	Age Twenty.			Age Thirty.			Age Forty.		
	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*
1st year.	0	14	0	0	18	9	1	4	6
2nd "	0	13	3	0	17	9	1	3	2
3rd "	0	12	6	0	16	8	1	1	9
4th "	0	11	7	0	15	7	1	0	3
5th "	0	10	9	0	14	5	0	18	10
6th "	0	9	11	0	13	3	0	17	3
7th "	0	9	0	0	12	0	0	15	7
8th "	0	8	0	0	10	8	0	13	11
9th "	0	7	0	0	9	4	0	12	2
10th "	0	5	11	0	7	11	0	10	4
11th "	0	4	10	0	6	6	0	8	5
12th "	0	3	9	0	5	0	0	6	6
13th "	0	2	6	0	3	5	0	4	5
14th "	0	1	4	0	1	9	0	2	3

Guarantee Policy for ten years, by which an annuity of £8. 8s. a-year, or 14s. a month, is purchased, payable from the time of the death of the Assured, until the expiration of the ten years.

Diminishing Annual Premiums.	Age Twenty.			Age Thirty.			Age Forty.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
1st year	0	14	2	1	0	0	1	5	7
2nd "	0	13	0	0	17	5	1	3	5
3rd "	0	11	10	0	15	10	1	1	3
4th "	0	10	6	0	14	1	0	18	11
5th "	0	9	2	0	12	4	0	16	6
6th "	0	7	10	0	10	5	0	14	0
7th "	0	6	5	0	8	7	0	11	6
8th "	0	4	11	0	6	6	0	8	9
9th "	0	3	4	0	4	5	0	6	0
10th "	0	1	8	0	2	3	0	3	1

Example:—Suppose a party, aged 30, borrows in order to purchase a house, £300, at the commencement of a building society, which is calculated to close in 10 years, and whose shares are £120. He requires for this loan five shares, since £60 is the present value of the £120, and has to pay 14s. monthly per share, or £8. 8s. per year during the ten years, which, for the £300 loan, necessitates an annual payment of £42.

Now, if the borrower die before the ten years are expired, the house is liable to be seized for the remainder of the mortgage unpaid, unless his family can continue the monthly instalments;—but if he effect, at the same time with his loan, a temporary policy on his own life for ten years, securing the annuity of £42 a year, or £3 10s. monthly, payable in case of his death, from that event until the expiration of the ten years, his family is rendered free from any liability by a comparatively small annual outlay, which is as follows: viz.—

	£.	s.	d.
1st year's payment............	5	0	0
2nd "	4	7	1
3rd "	3	19	2

	£.	s.	d.
4th year's payment............	3	10	5
5th ,, ...	3	1	8
6th ,, ...	2	12	1
7th ,, ...	2	2	11
8th ,, ...	1	12	6
9th ,, ...	1	2	1
10th ,, ...	0	11	3

From this it is seen that if, for example, the party die in the 4th year, he will have purchased an annuity of £42 a-year, for six years, by four payments amounting to £16. 16*s*. 8*d*.

It is evident the principle of such assurances is the same whether the payments of the building society are 10*s*. a month during fourteen years, or any other amount; and it matters not whether the loan be effected at the commencement, or in any other year of the existence of a building society. All that a borrower has to consider is the amount of his mortgage, and the number of years he expects it will run over; with these facts he can go to an assurance society, and be informed what premium and what amount of policy will suit his purpose.

46.—The guarantee annuity policy might be purchased by *equal* in lieu of *decreasing* annual payments, which would be nearly corresponding to the average of the rates above given; but, for the reasons assigned in Art. 195, of the "Treatise on Industrial Investment and Emigration," the payment of equal premiums should only begin at the second year.

47.—To resume, we would remark with an able author before quoted, that the "theory of insurance, with its kindred science of annuities, deserves the attention of the academical bodies. Stripped of its technical terms and its commercial associations, it may be presented in a point of view which will give it strong moral claim to notice. Though based upon self interest, it is the most enlightened and benevolent form which the projects of self-interest ever took. It is, in fact,

in a limited sense and by a practicable method, the agreement of a community to consider the good of its individual members as common. It is an agreement that those, whose fortune it shall be to have more than average success, shall resign the overplus in favour of those who have less. And though as yet it has only been applied to the reparation of the evils arising from storm, fire, premature death, disease, old age, (and dishonesty) yet there is no placing a limit to the extensions which its application might receive, if the public were fully aware of its principles, and of the safety with which they may be put in practice."

The foundation of every species of Assurance is the experience of the laws of average, and the object of every application of the principle is to secure the benefit of the average to the individual. Hence, while nothing is more uncertain than the duration of an individual life, nothing, it would appear, is more certain than the average life of a generation. In the same age, and in the same country, it is true, the rate of mortality may be affected by epidemics, scarcity of food, and other causes, but these influences are speedily counterbalanced: an intense vitality seems to succeed these periods of death, and the aberrations from the recorded laws of mortality of one period, are the measure of the counter-aberrations which mark the period following.

48.—The safety of a society, professing to assure its members against the loss attending any contingency, requires either that the number of its members be so large as to provide for all possible aberrations in the law by which the occurrence of the assured contingency is supposed to be regulated, or that a protective capital be paid up, or ready at call, to secure the society from inconvenience or chance of failure. In general such a capital is rarely paid up but in part, and the protection consists mainly of the personal security of a number of shareholders collectively making themselves answerable for the engagements of the society. Eminent writers,

judging from the difficulty which the older companies, with immense paid up-capitals, have experienced in making good interest for their money, have written against the effects of this circumstance, and imbued the minds of directors with a most mischievous tendency to neglect providing a sufficiency of paid-up capital in the establishment of new societies.

Such sentences as the following have been perverted by promoters, as an excuse for starting, recklessly, new institutions with scarcely more funds than would defray preliminary expenses. For example, a judicious authority says:—

"It may be taken as granted that an office charging premiums, * such as are commonly demanded, managed with prudence and economy, and successful in obtaining business, will not need any capital at all: firstly, because the premiums are such as must, in the long run, realise a profit after paying the expenses of management; so that the only use of the capital would be as a provision against extraordinary temporary fluctuations:—secondly, because a sufficient supply of business renders the probability of ruinous fluctuations extremely small, and altogether beneath consideration. Now, since it is well known that the premiums are sufficient, it follows that the only need which a commencing insurance has of capital is for safeguard against the early expenses of management, and against failure of business. The risk, however, at the commencement is not great in character, and small in amount; and the quantity of risk diminishes so much faster than the amount increases, that it may safely be said there is nothing in the commercial world which approaches, even remotely, to the security of a well-established and prudently managed insurance office."

In the present day it is very difficult to procure for a new

* Again he says:—If the premiums were really too low, capital would be an injury, and not a benefit, for, since this capital is really paid for, in whole or in part, out of premiums, it would not preserve the office from insolvency, but would rather accelerate its progress towards bankruptcy.

office a large capital, but in cases where it is proposed to insure some new and untried risk, a sufficient paid-up capital is essential. It has been justly said, that whatever pains may be taken in such a case to procure facts and deduce proper tables, there is always a risk that the experience of the office may be at variance with the facts of the tables. When, for instance, the general conclusions drawn from the mortality of towns were first applied to the insurance of life, it was a risk of unknown amount, as to whether the lives of those who would come to insure would be of the same class as those from which the tables were made. They might turn out better, or worse. The risk has been tried, and found to be in favour of the offices; but in another speculation, of another kind, the same species of risk might give a contrary result.

49.—For the well working of a new society it is requisite, therefore, that sufficient capital be *paid up* to defray expenses and contingencies for at least seven years; so that no delay or inconvenience may arise to check the business from difficulty in making calls on the proprietors; but as, after a sufficient revolution of time, an assurance business will protect itself, provision should be reserved in the deed of settlement to remove the incumbrance of the capital by returning it to the holders as soon as the state of the society's affairs permits. This could be done very gradually and by inconsiderable withdrawals from the society's assets, if the capital, say after fifteen years, were liquidated by a long annuity for some twenty years, calculated so as to give back not only principal and interest, but a bonus for the risk they have incurred.

50.—An excellent form of Protective or Guarantee capital for a new assurance society is suggested by the* *Tontine* principle. The capital to consist of paid-up shares held on the lives of nominees, and bearing dividends of interest and bonus payable

* See chapter 2, part 2, of "Industrial Investment and Emigration," for an account of Tontines, and the profits attending that system.

every five years among the surviving stock-holders, the gross capital, and any increase from Reserve Bonus, going to the survivor; or, *by the Redemption Tontine* plan, if the capital and the dividends were accumulated for ten years from the commencement of a society, and then liquidated by a long annuity to last until all the nominees were dead, and divisible equally among the survivors, then, while the society was flourishing, the shareholders would be increasing in income.

The Moral Urgency of Life Assurance.

51.—In conclusion, we would fain hope, that our readers are made sensible of the benefits to be derived, even as a mere matter of investment, from the application of the life assurance principle; and a few words may be suffered on its moral urgency, which alone affords earnest reasons why the system should be more extensively adopted.

It is needless to insist on that most necessary duty, which bids every man, both as a father and a husband, to promote the well-doing of his family, whilst he is alive to watch over them. With the exception of a solitary few, all men are conscious of its vital importance. It is a natural instinct or affection, intimately bound up with our existence, and often a source of intense pleasure. What we have rather to complain of, as deficient not in degree merely, but most often altogether, is, that, perhaps, even more binding duty, of providing for the *future* welfare of families. On the uncertainty of life we need not say anything; for, notwithstanding the incredulity of some men in respect to themselves, the *Bills of mortality* bear at once a startling testimony on the possible destruction of their hopes. And how many families are dependent entirely upon the income of a parent. How many have been thrown into irretrievable confusion by his sudden indisposition;—Or, still

oftener, how frequently has his sudden death reduced them to the most abject misery, so that their bread has been "dipped into tears," and they themselves brought "to sit on the margin of the grave."

52.—It is true, many plans have been adopted by the more conscientious and thoughtful for the provision of their families. Perhaps they endeavoured to accumulate their savings by depositing them at interest in a bank, or they were laid aside for the purpose of being invested in stock. But nothing could be more precarious than either of these methods. There was the apprehension of sudden sickness, or sudden death; or the payment might be interrupted by circumstances, sometimes purely accidental, sometimes lying wholly in the conduct of the parties themselves. It was not unseasonably, therefore, that the first *life assurance office* was established in England; for the advantages offered were immediate, evident, and most important. The great acquisition was this, that, instantly on effecting his assurance, or completing his first payment, however small, the individual secured the full object of his wishes; should he die at any moment after, his family were entitled to the *whole amount assured.*

53.—But it is remarkable, that, notwithstanding the manifest increase of late years in the numbers of life assurance societies, few individuals have, as yet, embraced the great advantage to be derived from them. It has been ascertained that, out of the very many families who are dependent entirely upon the mere *life* income of a parent or a husband,—that, in fact, out of upwards of thirty millions of people in the united kingdom, not more than two hundred and fifty thousand persons are assured, (excepting of course those who are members of mere benefit clubs, which mainly provide against sickness); and a large number of the policies effected in assurance companies are taken out as security in matters of business, not as provisions for families. Many reasons may be, however, assigned for this startling

fact. There appears to be a very great ignorance not only of the advantages which are afforded by the assurance system, but even of the very existence itself of such institutions. Even where there appears to be some knowledge, there yet exists an amount of prejudice, which, under the, now considered, too strict regulations of the more ancient companies might have been conceived, but certainly is not justified in the present day, and is altogether unworthy of these enlightened times. There are even a small party of silly *Illuminati* who view the system as irreligious, and consider it wrong to attempt to provide against the dispensations of Providence; but the feeling, which must be most taken into account, is that highly dangerous one of self-security,* which is so common—'all men think all men mortal but themselves'; and that equally prevalent antipathy among older people to such subjects as are connected with death. Doubtless this last-mentioned feeling, more than would be imagined, deters men from the assurance of their lives; they will not engage in any duty which reminds them of their end; and, ashamed of a way of thinking, at once mean and contemptible, they invent, to satisfy their consciences, all sorts of petty excuses for the evasion of it.

54.—We remember a case, which has always appeared to us a melancholy instance of the evil that may arise from the omission of the important duty which we are advocating. It is that of a young man, a clergyman;—though married, and having a family, he had still the resources of a good living, amply sufficient for the most varied requirements. To profound scholarship, and the inexhaustible riches of a fine intellect, he added all those kindlier qualities of the heart, which would make a man estimable But his character had its dark side too; his 'dazzling virtues' were not more numerous than his weaknesses. With thoughtlessness and irresolution he

* See art. 36, page 39, for remarks on the experience of assurance societies in respect to premature deaths among sound lives.

lacked sound judgment; and it is not surprising, therefore, that he often took that course which was positively hurtful. Among other things, he had deferred, from day to day, the carrying into effect of a long contemplated intention to assure his life. Being in strong health, he was not sufficiently sensible of the precarious tenure of his existence, or of the common prudence of not leaving one day between the cognizance of a duty and the fulfilment thereof. This was the more unfortunate, as he was destined to leave this world at a period when it is most precious; when, for his children, all was laughter, buoyancy, and happiness. Of the solemn death-bed scene we will say nothing; yet, perhaps, he had quitted life with more peace, had he provided for his family.

Need we wonder that, when, in after years, 'the proud man's contumely' had more than embittered the cold draught of poverty;—that, when, with the thousand natural ills which flesh is heir to, came the uncertainty of a precarious and toilsome existence, hard thoughts of that man fell even from the lips of his devoted wife? Need we wonder that, although gentle as any woman, yet she knew not how to repress at all times the murmurs of her children? Need we add, in fine, an account of her anxious watchings, of her endless toilings, her wasting melancholy; how she wept and struggled, struggled and wept, and, at last, was laid by the side of him, whose thoughtlessness had been the cause of all her sufferings.

The picture, we have here given, is not a mere outline, distinct perhaps, yet incapable of being filled up,—a sheer coinage of the brain; it is but a solitary example of a system which is loaded with evils the most palpable and pernicious:—so pernicious, that thousands upon thousands, we might say, of men's children are daily bearing testimony to its unfortunate consequences; but the most saddening point of reflection is, that, too frequently, the increase of their misery is in exact ratio with the extent of their merits. As they are the most virtuous and the most amiable, so does the blow of sudden change

..om comparative affluence to penury fall the harder; and the more delicate the nurture of the children during the lifetime of their thoughtless parent, the more painful do they feel the pressure of their altered circumstances. Oh, if every man, as a father and as a husband, were not only *conscious* of the duty which he owes to his family, but determined also to put into *practice* every expedient that might promote the exercise of it, how much harrowing misery would be spared to the unfortunate; what a large mass of moral and physical suffering could be obviated.

55.—But it will be objected by some that the "times are bad;" and that they are ill-able to afford so considerable a sum as would be necessary for the assurance of their lives. We would reply, that, even supposing they are unable to assure for the sum of £1000, or £700, or £500,—cannot they therefore secure £100, when this last can be obtained by the payment of little more than eightpence weekly? Of a truth, a life assurance society is adapted no less for the rich nobleman, than for the tradesman; while the former may make use of its full benefits for the provision of the younger members of his family, it need not be said how much both of benefit and of happiness may accrue to the latter by the payment of the small sum above-mentioned. Wives and mothers should see to it;—should reflect that no delicacy of sentiment should stand in the way of that duty by which the future welfare of their children can be so greatly affected. If unwilling to add to their expenses, or to urge the husband and father to greater efforts, let them economise from their weekly expenditure; let them lay by sums, however small, which may be appropriated to the completion of the desired object. Let those, who have but recently entered the married state, bear this in mind equally with others, who may be surrounded with a family. Let them remember, that the payments of an assurance are so equitably graduated according to age on entry, that the earlier a man begins the discharge of this excellent duty, the less will

be his future payments, and the easier the continuance of the self-imposed economy. The old man at sixty would have to pay £6. 15*s.* 3*d.* a year for the same sum which would cost £4. 3*s.* 3*d.* a year to the man at fifty, or £2. 4*s.* 8*d.* a year to that of thirty (see Table 1, page 51); and, where a participation in the profits of the society is purchased, instances are frequent where the allotment of Bonus, applied to the reduction of future payments, has, in policies begun when young, almost reduced to nothing the subsequent annual cost to the assurer.

56.—All, therefore, whose incomes are wholly dependent on their personal exertions, or upon their continuing in existence, should neglect no longer to lay aside a sufficient portion, by means of which some provision may be created for the maintenance of those they would leave behind them. The wretchedness of a family, reduced from easy circumstances to a painfully necessitous condition, which even though not equivalent to starvation, may deprive the widow of the means of educating her sons and daughters; of fitting them to earn their livelihood, and to contend with the competition of numerous others in similar positions,—that wretchedness, we repeat, can be prevented by comparatively so small an outlay, that the abstaining from a few indulgencies would give the head of the family the means of meeting it. To our mind, nothing can be more selfish than the manner in which thousands in good employment neglect altogether the facilities, which the life assurance system would afford to them. There might be some excuse for the deficiency of a provident spirit, if the only accumulation, which could be secured to a man's family, in the case of premature decease, were simply the amount of the actual savings themselves which he had put by; but, by the system of co-operation in question, he can secure not merely those savings, but the larger amount to which they would have accumulated in a long term of years.—Take the case of a man aged thirty, who lays aside £50 a-year from his

income. Suppose him to die unexpectedly, say in three years. If his savings had been merely invested at interest, his family would receive little more than £150; but, if he had subscribed to an assurance company (the charge for which at age thirty is £2. 4*s*. 8*d*. per cent.) they would receive £2238, nearly. This example must speak for itself, but in the words of an able periodical devoted to the life assurance cause, we would add, that, 'although in the great number of instances in which men fail to insure their lives as a provision for their wives and children, the neglect arises from the difficulty of withdrawing from a limited income even the small sum requisite for the annual payment of premium, yet it cannot fail, to occur to every person anxious for the welfare of his family, that this very difficulty is the strongest argument that can be advanced in support of life insurance. If a man whose income arises solely from his exertions, or from any other source terminating with his existence, finds the whole of that income absorbed in sustaining his position in society, let him contemplate the dreadful situation of those who are dependent upon his labours, when cut off, by his decease, from their sole means of support. Who is there who would not abstract something from his present enjoyments in order to protect a beloved wife, and the affectionate offspring around him, from so frightful a state of dependence upon the cold charity of the world! When it is considered, indeed, by what * small increments of saving the means of insurance may be obtained, it

* For example:—The weekly payment for a £25 policy at age 36, would be only 3¼*d*.

One pint of ale per day costs about 1*s*. 6*d*. per week, or 3*l*. 18*s*. per annum, which would assure to a man, aged twenty-five, the sum of £200, whenever his death might occur. By a similar payment, a person aged forty-nine could secure to his widow or children the sum of £100, in like manner. By a resolution to forego an useless luxury, a lad might secure to himself, not long after attaining his majority, one hundred pounds! By a like saving, a person aged thirty-three could in fifteen years become possessed of £100.

A married couple, about middle age, by denying themselves the pint of beer which they usually take at dinner or supper, could secure to the survivor

is surprising that any instance should exist in which it is not effected—a few tavern visits less, an occasional mislaying of the key of the wine cellar, a tight stopper in the spirit bottle, a water side visit put off till next year, a party omitted to be given, a slight forgetfulness of the length of time a coat or a silk gown has been in wear, and a score other things of the kind, present an ample variety of sources for furnishing the small annual sum requisite to place a family in security. Many men who have a strong perception of the importance of insuring their lives, unfortunately neglect to do so from the belief that in a little time they will be in a better position to do so—next year, trade may be more brisk, or an official salary may be increased, or an old aunt may die—but next year brings with it its own necessities; and even if it did not, what peril is encountered in the delay? It should be borne in mind that people can only insure when they are in the most perfect state of health—a whitened tongue, or a quickened pulse, find no passport of admission to a life office; and who shall say he is secure, for a single hour, from some derangement of system, that may bring these symptoms upon him. What anxiety must he who is waiting for the proper moment to insure, sustain at every incipient approach of illness? The spasm he feels may be the herald of cholera—the sudden ache in the temple may be the courier of death.'

57.—The insurance of life in all cases is wise—in many, absolutely necessary—in some, an imperative duty. How many of our readers, who at this moment possess a comfortable competency, would, in the event of death, leave their families in a state of destitution. How many family circles, the heads of which are in the receipt of a liberal salary, living in hand-

of the two, upon the death of the first, upwards of £100; or they might secure to a child of two years of age, a like sum when it came of age.

An ordinary smoker consumes fully one pennyworth of tobacco per day; but the sum thus spent in an useless and dirty habit, if applied in a proper manner by a person at the age of twenty-five, would secure to him £100 on his attaining the age of sixty years.

somely furnished houses, and keeping excellent tables, would by a single death, be suddenly deprived of all, and doomed to penury and wretchedness. How many wives and children have exchanged their happy homes to become the inmates of union workhouses, from the neglecting of life assurance by that person through whose means they were enabled to live in comparative affluence.

58.—One word to the Insurance companies themselves,—the majority of their publications in support of life assurance have addressed themselves mainly to making an impression upon the minds of the middle and higher classes, and even there they only partially succeed in their object. The humble operatives, whose circumstances are more precarious, have not been addressed with the same anxiety to produce conviction. To the managers we would say that, if their object be truly to make life assurance universal, they must first remove, as far as the principle of the system will allow, many imperfections in the practice upon which they apply it. They must cease to consider that the industrial portion of the community are for ever to be exposed to leave their successors no better off than they themselves have been. They must induce the industrious mechanic, the small tradesman, and others in a similar position, to give the subject more careful consideration, as a matter coming home to themselves, and within the reach of their narrow resources; and we doubt not, that when they see existing obstacles removed, they will turn to the system with anxious desire.

END OF PART I.

NOTE TO PAGE 3.

Pending the publication of Part 2, the following remarks may be acceptable to our readers, which formed the substance of a letter we recently addressed to the Chancellor of the Exchequer, on the subject of Savings Banks.

It is generally understood, that a new Bill for the better regulation of Savings' Banks in this country will be introduced in the next session of Parliament (1852), containing various clauses similar to the Bill introduced by Sir C. Wood, the Chancellor of the Exchequer, in 1850, which, at that time, were considered as questionable in their expediency and uncertain in their application.

The difficulties which the new Bill will have to meet are at least, of two-fold character.

The first has reference to the instances of grievous fraud and mismanagement which have been, and at this time are still, unhappily, occurring in Savings Banks. To the second we will refer presently.

How frauds can be prevented.

In respect to frauds, which have been so frequent, they can only be prevented by an improved system of Auditing the accounts; and the true system will suggest itself, if we compare Savings Banks with other kindred institutions. For this we should notice that, out of the thousands of ***Friendly Societies*** and ***Benefit Building Societies*** which swarm in the united kingdom, and which are under the personal control of the contributors or depositors, ***although*** not unfrequently instances are adduced by actuaries and other competent persons of the ***unsoundness*** of the ***rules*** and tables on which they conduct their business, ***yet*** but in rare instances do

Errors, not often frauds occur in Friendly societies.

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we hear of *money* being lost to the members by the peculation of its officers; and the instances, which do occur, are measured by a few hundred pounds.

The reason is obvious, and, by contrast, explains the cause of the possibility of that startling continuity of defalcations which has prevailed in so many *Savings Banks.*

Reason for *frauds* rarely occurring in *Friendly* societies.

In the *Friendly Societies*, and similar industrial associations, supervision, in the details of their affairs and their accounts, is entrusted to an ELECTED committee of management, who lay statements before the contributors or members, at *periodic quarterly* (or, occasionally, less frequent) meetings, when questions of all kinds may be asked, and vigilance exercised by any member.

Contrast in the system of Savings Banks.

In the *Savings Banks*, the case is different, there are—

1°. *Depositors*, enjoying extraordinary privileges, not afforded by any other medium of investment, but debarred from all controul, whether of supervision or of audit, in the operations of the Bank.

2°. There are *Trustees* and *Managers*, who, until recently, made it a practice, with but few exceptions, to neglect their duties, and to trust to the supposed honesty of the *actuary* or other inferior officer, for the correctness of the discharge of his duty, whether as regards *errors* in obeying *legal enactments*, or *frauds*, and

Respecting the *National Debt Commissioners.*

3°. We have the Government, through the *National Debt Commissioners*, who were supposed by the *depositors* and by *educated* persons of all ranks (excepting, perhaps, lawyers) to be responsible for the money on its way from the depositors *through* the Bank, up to their hands; and, although it is certain that no *legal* responsibility is attached to the Commissioners, under the *present* law, yet they do not appear even to have always considered it necessary to exercise the power (very limited, it is true), whereby that *moral* liability

might have been avoided which has been conceded to them by public opinion.

In fact, they do not appear to have deemed it necessary to exercise that check on the *annual returns* which the Acts in force provided.

The Bill of 1850 *drew the responsibility on Government.*

The Bill of 1850 appears most unnecessarily to have proposed the adoption by government of the *whole responsibility*, for the future, by delegating the safe *transmission* of the Bank's receipts to paid *Treasurers* resident in the locality of each Bank. Now, laying aside the probability that such a mode of control would be most unpalatable to the trustees and officers of every Bank in the kingdom, there is no doubt that, even if that Act had passed, the clauses were not, doubtless from the nature of the case, sufficiently comprehensive to have secured to government that absolute *detailed* security from fraud which would be essential if they were to accept such responsibility.

Clauses not comprehensive.

Savings' Banks are beneficial mainly in a moral sense.

Nor do we see any reason why the *Nation* at large, which gains nothing beyond the *moral* advantages attending the encouragement of *Savings Banks*, should become *pecuniarily* liable for the correct management of a Bank, which is the *agent* of the depositors in *transmitting* their money to the *National Debt Commissioners* for investment.

Respecting the expected new Bill.

We would therefore urge, that in the new bill, the Chancellor of the Exchequer should abandon all attempts to accept *such responsibility*, nor should he pause for a moment on the supposition that *Trustees* will be found who will sign, *under the present system*, acknowledgments of responsibility, or who would continue in office if such acknowledgments were demanded; but we would rather confide to the *Depositors*, themselves, the watching over the safe transmission of their funds. Let them

The depositors should be the guardians of a Bank.

feel the same interest in the details of the working of their Bank and in the conduct of its officers, that they have in all other *Industrial associations.*

Clauses proposed.

The clauses should run thus :—

Appointment of auditors by depositors.

I. And be it enacted, That the *Trustees* of each Savings Bank in Great Britain and Ireland shall, as soon as conveniently may be after the passing of this Act, and from time to time in case of a vacancy, *summon* the *Depositors* to *meet* together, in order to *appoint* three or more *Auditors* to audit the *accounts* of the said institution, as well as *to examine and inspect the account books* of the bank, and the *books* of the *several depositors;* and the said *Trustees* shall, immediately after such appointment, transmit the *signature*, *name*, and *address* of the said *Auditors* to the *Commissioners* for the reduction of the national debt; and the *Trustees* of every Savings Bank shall *cause* the *annual* and other *statements*, required to be transmitted under the Acts relating to Savings Banks, to be *certified* and *verified* by the *auditors* so appointed by the said depositors, *in addition* to the attestation by trustees and managers *now required* by the said Acts; and shall, also, cause a *certificate* from the *said auditors*, as to the *result* of their examination of the account books of the bank and of such of the depotor's books as may have been produced to them for examination, to be *transmitted with* the *said annual* statement to the said *Commissioners.*

Power to appoint common auditors for more than one Bank.

PROVIDED always, that it shall be *lawful* for the depositors, with the assent of the trustees of any such Savings Bank, to agree with the depositors of any other Savings Bank or Banks, as to the appointment of *common* auditors; and the auditors, so appointed for all the said Banks shall be deemed and taken, as soon as the signature, name, and address shall have been transmitted by

each such Bank to the said commissioners, to be the *auditors* of *each* such Bank.

Time of summoning the depositors to meet.

PROVIDED always, that the depositors be *summoned* within *one month*, after a vacancy has occurred, by *advertisement* in two or more of the local newspapers, and by announcement affixed in a conspicuous place in the *office of the Bank;* and provided that the *Depositors* shall have *power* to *adjourn* their meeting or meetings for the election of auditors, at intervals of not more than fifteen days, as often as may appear to them necessary for the *better selection* of such auditors; and that it shall be lawful for them to *delegate the selection* of auditors to a committee of the depositors, not less than twelve in number, who shall not be acting at the time as trustees or managers of the Bank. PROVIDED always, that the *Auditors* to be elected *may* be either *depositors*, or experienced accountants (publicly acting in such capacity;) and PROVIDED that, in the event of *no* such selection being made within *three months* after a vacancy has occurred in the office of auditors, the *Trustees* shall *report* the same to the *Commissioners* for the reduction of the national debt, *who* shall with all convenient speed themselves *appoint Auditors* for the purposes above provided.

Power to adjourn.

Power to delegate the selection of auditors.

If no selection be made by depositors then commissioners shall act.

Depositors books to contain copy of Rules.

II. And be it enacted, That every Depositor in every Savings Bank in Great Britain and Ireland, on his first deposit shall be furnished with a deposit book, in which shall be printed at length a copy of the certified rules of the Savings Bank, in which he shall make such deposit;—and that a duplicate copy of the certified rules, and of every alteration and amendment thereof, and a duplicate copy of every *annual* statement, or account required by and furnished to the said commissioners, *signed by the Auditors* and by two Trustees or managers of any such Savings Bank, *shall* be from time to time *exhibited* in the *office* of such Savings Bank, and shall be *open to the in-*

Duplicate copy of certified rules &c. to be exhibited in office.

spection of every depositor or person intending to be such.

Auditors to attend without notice. Rules to provide for production of books.

III. And be it enacted, That the *auditors* shall have *power without notice* to *attend* and *inspect* the *account* books of the Bank, and, from time to time, to fix a number of days, not less than two in every year ending on the twentieth of November, on which the books of each depositor shall be produced at the office of the said Savings Bank, for the purpose of being inspected, examined, and verified with the books of the institution by the said *auditors;* and *in case* the said book shall *not* be produced on or before the last of the days mentioned in any one year ending as aforesaid, the *auditors* shall *report* the same to the *trustees*, who shall cause the said account to be *closed*, and all interest shall cease to accrue on the sums deposited on the last day of the year in which the said book should have been so produced, in the case of every depositor who shall have received notice to produce his said book, and of every depositor in a Savings Bank the rules of which provide for the production of deposit books once in each year: Provided nevertheless, that the trustees or managers shall have the power to re-open the said account, but only to allow interest thereon from the time when the same shall have been re-opened, unless the trustees shall have been satisfied that such depositor has been prevented by some sufficient cause from producing the deposit book at the time so specified; and an extract of this provision shall be enrolled as one of the rules of every Savings Bank.

IV. And be it further enacted, That it shall and may be lawful for the Lord high Treasurer, or the Commissioners of her Majesty's Treasury of the United Kingdom of Great Britain and Ireland, for the time being, and they are hereby authorized and empowered to settle and appoint such allowances as shall be recommended by the Commissioners for the reduction of the

national debt for the services, pains, and labour of such Auditors, in manner and for the purposes aforesaid, and out of the fund upon which the establishment of the said Commissioners is chargeable by any Act now in force, to pay and discharge all such allowances, and all other incidental charges, which shall necessarily attend the execution of this Act, in such manner as to them shall seem just and reasonable.

End of clauses.

To the Depositors' periodic *Audit-clauses* should be added others enforcing one *uniform* system *of book-keeping* in all Banks within a reasonable time after the passing of the act, the system to be settled (*after* the act is passed) by a select small number of *professed accountants*, who should be instructed to examine into the various systems in practice in the leading Banks and who should *confer* with the managers thereof.—They should *then report* to the *National Debt Commissioners* so that, on their ratification, a system for uniform adoption might be promulgated to every bank in the kingdom, to be carried into operation within a specified time.

The system of accounts should be uniform.

Reasons for advocating uniformity of books.

Our advocacy of the *uniformity of Bookkeeping* has rise in the desire to *facilitate* the occasional *inspection* by officers of the *National Debt Commissioners* into the *working* of the Banks, under a power which *should* be reserved in the *new* act.

The legal working of each Bank should be seen to by inspectors of the National Debt Commissioners.

That inspection, however, should extend from the *accounts* into a periodic inquiry as to the strict attention of the Savings Banks' managers to *not infringing* or *neglecting* to comply with the various provisions of the LAW relating to those institutions. At present not only are *Frauds* perpetrated, but the *Law* is departed from with singular recklessness of consequences.

We will adduce in Part 2 some considerations re-

specting the second kind of difficulty that the new bill will have to provide for, arising from—

1. *The Rate of Interest allowed to Depositors, and the limit of Deposits.*
2. *The power of withdrawal.*
3. *The proposed modification in the government system of Deferred Annuities.*
4. *The proposition in the Bill of* 1850 *to grant a species of assurances for sums payable at death.*
5. *The compulsory conversion of Deposits into stock when they have attained a given amount; and many other points.*

APPENDIX.

THE DEPOSIT SYSTEM.

Extracted from a *Treatise on Industrial Investment and Emigration*, by A. Scratchley, M.A. Second Edition. John W. Parker, London.

Respecting Single Deposits.

Art. 1.—To extend the operations and benefits of Industrial Associations, Sums of money might be received as deposits, for a nominal period of years, at interest, with power of withdrawal on demand, or with very short notice, of a portion thereof. Such a system would afford to the depositors the usual convenience of the savings banks, in respect to the withdrawal of their money; while they would obtain the advantages of a much more remunerative interest, provided the agreement were, that the interest already *due* upon any portion withdrawn (if that should happen) should remain over with the rest of the deposit, as an investment to be received at the expiration of the originally agreed term of years. On such an hypothesis, the *withdrawable* part of the principal should be considered as producing a less periodic interest, than both the other part of the deposit and the general instalments of interest themselves do when reinvested; or it should be treated as laid out in readily convertible securities, such as the public funds, exchequer

bills, &c., which produce but a moderate rate of interest. The remainder of the deposit, and the instalments of *interest* from time to time accruing on the withdrawable portion, (not being liable to unexpected demand,) can be laid out in much less available security, such as mortgages on land or houses at a higher rate of interest, or in fact they might be engaged in the society's operations. For example, if £10,000 were the amount of numerous deposits on such terms for an agreed period, and £2000 were withdrawable on demand, that sum should be invested in ready security, say at 2½ or 3 per cent., and the remainder £8000 in more lucrative investment at 5 per cent., or even more, with the periodic annuity instalments of £50 or £60 a-year on the £2000, as from time to time they come in.

2.—*We have said that the right of withdrawal might be on demand, as the floating income of the society would much exceed, under ordinary circumstances, the average amount of applications.* A power, nevertheless, could and should be reserved, to the committee of management or directors, to *suspend withdrawal payments*, if an unexpected pressure caused too great inconvenience or menaced the stability of the society. As the institution would be based upon principles of co-operative mutuality, such a power would be strictly equitable.

3.—Let D_n = the amount payable in return for a deposit P, if invested and not withdrawn for n years.

$\frac{P}{m}$ = the portion which may, if required, be withdrawn on demand.

i^1 = the rate of interest at which $\frac{P}{m}$ is invested.

i = a higher rate, at which $\frac{m-1}{m}.P$, and the periodic instalments $\frac{P.i^1}{m}$ of interest at i^1 per pound on $\frac{P}{m}$, can be invested during the n years.

Then it is plain that D_n is the amount of P at i per pound for n years, less the amount of a small annuity $\frac{P}{m}(i - i^1)$, accumulated at i interest, arising from the lower rate at which $\frac{P}{m}$ is invested; or

$$D_n = P\left\{(1+i)^n - \frac{i - i^1}{m} \cdot \frac{(1+i)^n - 1}{i}\right\} \dots (1).$$

This equation contains results afforded by known tables such as those at the end of this work, so that a single deposit table can be readily calculated.

An identical result, but in another form, might be obtained, by a different mode of reasoning, in which

$$D_n = \frac{P}{m}\left\{\left[m - 1 + \frac{i^1}{i}\right](1+i)^n + 1 - \frac{i^1}{i}\right\} \dots (2).$$

4.—Let the *whole* be withdrawable on demand, then $m = 1$ in equation (1) or (2),

$$\therefore D'_n = P\left\{(1+i)^n - (i - i^1) \cdot \frac{(1+i)^n - 1}{i}\right\} \dots (3).$$

or

$$D'_n = P\left\{1 + i^1 \cdot \frac{(1+i)^n - 1}{i}\right\} \dots\dots\dots\dots\dots (4).$$

5.—Let the m^{th} part of P not be withdrawable for μ years, which is the more general case, $n > \mu$, then

$$D_{n|\mu} = P\left\{\overline{1+i}^n - \frac{i - i^1}{m} \frac{(1+i)^{n-\mu} - 1}{i}\right\} \dots (5).$$

In practice, μ might be taken with advantage equal to 3.

Example:—Let £10,000 be deposited for 10 years with the understanding that, after 3 years, £2,000 may be withdrawn on demand.—Let 3 per cent. be the annual rate of interest allowed

upon the £2,000; and 5 per cent. be that upon the £8,000, and upon the annuity £60 a year.—Then by eq^n (5),

$$D_{10|3} = 10,000 \left\{ (1{\cdot}05)^{10} - \frac{{\cdot}02}{5} \cdot \frac{\overline{1{\cdot}05}^7 - 1}{{\cdot}05} \right\}$$

$$= 10,000 \left\{ 1{\cdot}6288 - .004 \times 8{\cdot}142 \right\}$$

$$= £15,962. \qquad \text{(See Tables 3 and 9).}$$

6.—To determine a relation between D_p and D_q any two terms in Art. 3, $p < q$.

Then, referring to the mode of investment,

$$D_q = D_p \,.\, (1 + i)^{q-p} - \frac{P}{m}(i - i^1) \,.\, \frac{(1 + i)^{q-p} - 1}{i} \,..(6).$$

If $q = p + 1$, the relation between the successive terms is given by

$$D_{p+1} = D_p \,.\, (1 + i) - \frac{P}{m}(i - i^1) \,\ldots\ldots\ldots\ldots\ldots (7).$$

a form suitable for the calculation of the table.

7.—Referring to Art. 5, to determine a relation between two terms $D_{p|\mu}$ and $D_{q|\mu}$, where p and q are both greater than μ.

Since the μ years have elapsed, the relation will be identical in form with that (6) of the preceding article, or

$$D_{q|\mu} = D_{p|\mu} \,.\, (1 + i)^{q-p} - \frac{P}{m}(i - i^1) \,.\, \frac{(1 + i)^{q-p} - 1}{i} \,..(8).$$

Let $q = p + 1$.

$$\therefore D_{p+1|\mu} = D_{p|\mu} \,.\, (1 + i) - \frac{P}{m}(i - i^1) \ldots\ldots\ldots (9).$$

8.—The case, where p is $< \mu$ and $q > \mu$, need not be considered, as the formula would be of no advantage in constructing a table.—Until $p > \mu$ the equation will be simply $D_p = P\,(1 + i)^p$; after which equation (9) will serve.

9.—To determine in Art. 5, the remainder of the depositor's claim to be received at the end of the n years, if he withdraw $\frac{P}{m}$ when n_1 years ($n_1 < n$) have just expired.

As by the agreement n_1 must be greater than μ, the effect produced by the withdrawal of $\frac{P}{m}$ in reduction of the original amount $D_{n|\mu}$ will be equal to that amount, which by eq^n (4) $\frac{P}{m}$ would produce if deposited, for withdrawal on demand, for $(n - n_1)$ years.

$$\therefore \left.\begin{array}{r}\text{The remainder}\\ \text{of the claim}\end{array}\right\} = D_{n\,|\,\mu} - \frac{1}{m}\cdot D'_{(n-n_1)} \;\cdots\cdots\; (10).$$

A simple formula to ascertain the outstanding liabilities of the society upon those deposit shares of which a portion $\frac{P}{m}$ has been withdrawn.

If the Table represented by D'_n should not be ready at hand,

$$\left.\begin{array}{r}\text{The remainder of}\\ \text{the claim may}\\ \text{be calculated as}\end{array}\right\} = \left[D_{n_1|\mu} - \frac{P}{m}\right](1+i)^{n-n_1} \;..\; (11).$$

10.—Again, Art. 5, suppose that the m_1^{th} part only be withdrawn after n_1 years, where m_1 is $> m$; then the *Remainder of claim* as regards eq^n (10) will still be of the same form, viz.

$$D_{n\,|\,\mu} - \frac{1}{m_1}\cdot D'_{(n-n_1)}$$

But, in respect to eq^n (11), it would be represented by the expression $\left[D_{n_1|\mu} - \frac{P}{m_1}\right](1+i)^{n-n_1} - P\cdot\frac{m_1 - m}{m\,.\,m_1}\,.\,(i - i^1)\,.$

$$\frac{(1+i)^{n-n_1} - 1}{i} \;\cdots\cdots\cdots\cdots\cdots\cdots\; (12).$$

Where $D_{n_1|\mu}$ is a value given by the table used by the society to calculate $D_{n|\mu}$, and the expression is deduced by considering, according to eq^n (1), that $D_{n_1|\mu} - \frac{P}{m_1}$ is a sum of money invested

for $(n - n_1)$ years, with the understanding that a portion of it, equal to $\left(\frac{P}{m} - \frac{P}{m_1}\right)$, shall be withdrawable on demand.

If the withdrawal, in the preceding articles, take place in the course of any year, and not exactly at the end thereof, the preceding results would require to be modified with an allowance of simple interest for the fractional part of a year.

Annuity Deposits.

11.—Instead of a single deposit, as in Art. 5, let the contract be for a series of periodic deposits, each equal to P, during the n years, with the understanding that, after μ years have passed, the m^{th} part of the aggregate deposits invested may be withdrawn on demand, the remainder of the claim standing over to the end of the term. Then, representing by $AD_{n|\mu}$, the amount to which, if not withdrawn, they would accumulate, we have, since by the hypothesis of the question, the m^{th} part of all the deposits made, once μ years have elapsed, are liable to withdrawal on demand.

$$AD_{n|\mu} = \left\{D_{n|\mu} + D_{\overline{n-1}|\overline{\mu-1}} + D_{\overline{n-2}|\overline{\mu-2}} + .. + D_{\overline{n-\mu+1}|1}\right\} + \{D_{n-\mu} + D_{n-\mu-1} + \dots + D_2 + D_1\} \dots\dots\dots\dots (13).$$

$AD_{n|\mu}$ thus will be readily found, if the general tables for $D_{n|\mu}$ and D_n happen to have been calculated for the society.

12.—If not, the expression can be reduced by eq^n (1) and (5), to

$$AD_{n-\mu} = P\left[\left\{\overline{1+i}^{\,n} + \overline{1+i}^{\,n-1} + \dots\dots + \overline{1+i}\right\} - \frac{i-i^1}{m}.\left[\frac{\mu.\overline{1+i}^{\,n-\mu} + (\overline{1+i}^{\,n-\mu} + \overline{1+i}^{\,n-\mu-1} + .. + \overline{1+i}) - n}{i}\right]\right]$$

$$= P\left[(1+i)\frac{\overline{1+i}^{\,n} - 1}{i} - \frac{i-i^1}{m \cdot i}\left\{\mu.\overline{1+i}^{\,n-\mu} + \overline{1+i}\,.\,\frac{\overline{1+i}^{\,n-\mu} - 1}{i} - n\right\}\right],$$

which results contain only quantities

that can be easily obtained from the ordinary Amount and Annuity tables 3 and 9.

13.—From the preceding equations, we have, when $p > \mu$, a relation between $AD_{p+1|\mu}$ and $AD_{p|\mu}$.

$$AD_{p+1|\mu} = (AD_{p|\mu} + P) \cdot (1+i) - (p+1)\frac{P}{m}(i-i^1) \ldots (15).$$

14.—If a withdrawal take place at the end of n_1 years, and $n_1 \cdot \frac{P}{m}$ be withdrawn, the *Remainder of the Claim* (if no further payments be made),

$$= \left\{ AD_{n_1|\mu} - n_1 \cdot \frac{P}{m} \right\} (1+i)^{n-n_1} \ldots\ldots\ldots\ldots\ldots (16).$$

15.—The preceding principle of adopting *two* rates of interest as the basis of a *Savings Fund* presents many advantages; on the one hand, greater inducements would be offered to the industrious to strive to effect savings, through the higher interest they may thus obtain; at the same time that the absence of power to withdraw, in a hurry, more than a small portion of their deposits would act as a check upon subsequent extravagance. Whilst, on the other hand, the government or private company which undertook the investment of the money received would be less exposed to inconvenience or loss through Withdrawals.

ON DEPOSIT LIFE ASSURANCE.

16.—The formulæ for the system of Deposit Life Assurance, which we have previously mentioned, [Art. 35, chapter 2, page 25,] are simple and easily determined. As it presents another feature of provident investment for the savings of the industrious classes, a few words upon the system will not be out of place

in this Appendix. The advantage offered consists of the Savings Banks' facilities of withdrawal of the whole or part of the deposit premium, whilst the benefits of an ordinary life office are secured. Adopting the now general notation,

Let l_x = number of lives in existence at age x by the table of mortality adopted.

r = the present value of £1, at i per pound, to be received in one year $= \frac{1}{1+i}$

a_x = the present value of an annuity of £1 payable at the end of each year, and to continue during the existence of a life aged x.

or $a_x = \text{Sum } \frac{l_{x+y} \cdot r^{x+y}}{l_x \cdot r^x}$ summed between $y = 1$ and $y =$ the number of years of extreme age in the table.

$\therefore 1 + a_x$ = value of £1 annuity during life, of which the first instalment is payable at once.

$\therefore$ £1 = present value of a similar annuity of $\frac{1}{1+a_x}$ a year.

Let p_x = the mathematical annual premium to assure the sum of £1 to be received at the *end* of the year in which the life x may die.

$$\varpi_x = \text{the office annual premium} = f(p_x)$$

17.—Then p_x may be determined from a table of Life Annuities a_x in the usual way, or thus:—A person borrowing £1 at once for the term of his life could repay it with interest by an annual payment at the beginning of each year, consisting of the premium of assurance to restore the principal at his death, and annual interest i per pound, which if paid yearly in advance would be reduced to $\frac{i}{1+i}$.

$\therefore$ £1 would be repaid by, and is therefore equivalent to, an annuity payment of $p_x + \frac{i}{1+i}$.

But £1 (as we have said in the definition of a_x) would buy an annuity of $\frac{1}{1+a_x}$ on the same life involving the same rate of interest. These two values must be equal:

$$\therefore p_x + \frac{i}{1+i} = \frac{1}{1+a_x}$$

$$\therefore p_x = \frac{1}{1+a_x} - \frac{i}{1+i} \quad \text{(1)}.$$

18.—Into the value of a_x, which is made use of in the preceding formula, enter the considerations depending on the table of mortality (see Table XV). That formula itself is identical, as it should be, in form with that, by which would be determined the requisite annual payment at the beginning of each year, or the sinking fund, to accumulate to £1 at the end of a term certain of $x+1$ years, in terms of the *present* value P_x of an ordinary annuity £1 for x years, where

$$P_x = \frac{1-(1+i)^{-x}}{i} \text{ (see Art. 31, Appendix to Treatise), and}$$

$$\text{Annual payment or sinking fund} = \frac{1}{1+P_x} - \frac{i}{1+i} \ldots\ldots\ldots\ldots\ldots \text{(1 bis)}$$

19.—We may mention here, incidentally, that, if for a_x were substituted the values of an annuity for the whole duration of two or more lives, the formula would bear the same relation with regard to them, as it does to the single life, and the symmetrical form would be preserved.

20.—Let P = the single deposit money to purchase a life assurance policy D_x to be received at death, with the understanding that, after twelve months have elapsed, a sum equal to $\frac{P}{m}$ may be withdrawn on demand, or at very brief notice; then it would be requisite for the safety of the company to invest the withdrawable portions at a much lower rate of interest, or in immediately convertible securities, if it be desired to be always ready to meet all *withdrawal* demands. The chance of early repayment of the *whole* deposit, from being deducted through *death*, does not enter into that consideration, as, on an average of lives, supposing the general funds of the company to be invested in the usual manner, the payments and receipts would follow the law of mortality.

The calculation of D_x will therefore be analogous to that for determining the *single* premium for the assurance of £1; with this difference, that our plan consists in keeping the rates of interest allowed upon P or $\left(\frac{m-1}{m} P \text{ and } \frac{P}{m}\right)$ independent of the rate of interest and margin originally adopted in the determination of π_x, and in making a table containing the values of π_x the basis for calculating D_x,

Let an ordinary whole life annual premium table be in use by the company.

i = the highest rate of annual interest that the company can afford to credit upon $\frac{m-1}{m} \cdot P$.

i^1 = a lower annual rate allowed upon $\frac{P}{m}$.

From the moment P is deposited, the assurance risk represented by D_x commences, although, according to the usual theoretical hypothesis (contrary

to the occurrence of actual practice), D_x is not payable until the *end* of the year in which the life (x) may die. Proceeding, however, on that supposition, the sum assured D_x will be equal to the deposit P and a sum (D_x — P) arising from the interests upon P. Now P, deposited, is credited with annual interest $= P . \frac{(m-1)\, i + i^1}{m}$ due at the end of each year, which is equivalent to $\frac{P}{m} \left\{ \frac{(m-1)\, i}{1+i} + \frac{i^1}{1+i^1} \right\}$ at the beginning.

Hence, since the annual premium π_x paid at the beginning of every year of life would assure £1 payable at the *end* of that year in which the life may die, the deposit P may be considered by the company as producing at the beginning of each year a premium $= \frac{P}{m} \left\{ \frac{(m-1)\, i}{1+i} + \frac{i^1}{1+i^1} \right\}$

$$\therefore D_x = P + \frac{P}{m} \left\{ \frac{(m-1)\, i}{1+i} + \frac{i^1}{1+i^1} \right\} \frac{1}{\pi_x} =$$

$$= P . \left[1 + \frac{1}{m} \left\{ \frac{(m-1)\, i}{1+i} + \frac{i^1}{1+i^1} \right\} \frac{1}{\pi_x} \right] \quad \ldots\ldots\ldots\ldots (2).$$

21.—By this equation, a table of deposit assurances can be deduced from an ordinary life table on substituting the values of π_x at various ages; and the *Deposit-Policies* will be with or without profits, according to the hypothesis relative to π_x. In practice, it would be generally expedient and reasonable not to allow any withdrawals until after a small number of years μ, greater than one, in which case, the eq^n (2) should still be used, as it is not worth while to complicate it by the consideration that during (μ — 1) years the rate of interest i might be credited on the whole of P. The advantage would be in favour of the company. When μ is not less than 3, we consider that i^1 may be taken $= \cdot 025$ and $i = \cdot 035$. This will be understood by the consideration that in all investments of this kind accepted by Assurance Companies, or Benefit Building and other similar Societies, the larger the portion of his deposit over which the depositor has power of withdrawal on demand, the greater will be the capital which must be kept by the company in immediately convertible securities to meet sudden withdrawals; and the lower will be the average interest derived on the aggregate of its funds. If six months' or a year's notice were required of intended withdrawal, the case would be different.

22.—If $\pi_x = p_x$, $i^1 = i =$ the same rate involved in p_x, and $m = 1$, $D = 1$, eq^n (2) reduces to

$$1 = P . \left\{ 1 + \frac{i}{1+i} \cdot \frac{1}{p_x} \right\} \quad \ldots\ldots\ldots\ldots\ldots\ldots (3),$$

the ordinary formula expressing the relation between the single premium P and the annual premium p_x to assure £1.

23.—As regards assurers, eq^n (2) gives the amount of policy which an *occasional* deposit would assure upon his life. To the industrious classes one or two smaller policies, created by single deposits, are more convenient than the general system by which a fixed premium is required at regularly recurring intervals, without their having, in most offices, any protection against the loss of the policy, in the event of the assurer's means not enabling him to keep up his payments. The advantage of an ordinary Savings' Bank is also presented, since a portion of his deposit money may be withdrawn on demand. Such policies would thus serve as negotiable commodities in commercial transactions.

24.—Suppose an ordinary *Annual Premium* Policy of Assurance to be taken out by a life aged x years, and, after a certain number of years y, the assurer desire to suspend all future payments, and to obtain, for his acquired interest in the company, a *Deposit-Policy;* then the amount thereof

$$= (\text{office value of old policy}) \times \left[1 + \frac{1}{m}\left\{\frac{(m-1)\,i}{1+i} + \frac{i^1}{1+i^1}\right\}\frac{1}{\pi_{x+y}}\right] \text{..(4)}$$

(the m^{th} part of the office value of the old policy being withdrawable).

25.—If after y years, $\frac{P}{m}$ be withdrawn on a deposit policy, the *diminution* in the policy, (found by reducing eq^n (2) to the case of the whole of the deposit being withdrawable on demand, and applying it to the effect produced by withdrawing $\left.\frac{P}{m}\right) = \frac{P}{m}\left\{1 + \frac{i^1}{1+i^1}\cdot\frac{1}{\pi_{x+y}}\right\}$ .... (5), an endorsement upon the original deposit policy would then be made stating that it is diminished to the extent represented by (5).

26.—The Society should always get the benefit of the difference between the *office* and *real* age of the depositor, both at the time of entry and at that of withdrawal, with the distinction that x in (2) should be taken at *next* birthday, but $(x+y)$ in (5) at *last* birthday.

27.—By way of further illustration of the analogy between functions of annuities for *Terms certain* and for the *whole* duration of a life or lives, we will refer to Art. 30 in the Treatise, and will show how the property $\frac{1}{P_n} - \frac{1}{A_n} = i$ .. (6) will serve, in the case of a life annuity, to determine the *single premium* S_x *to assure £1 at the death of a life aged x.* [In No. 21 of these notes P stands for S_x.]

For the *present value* of an annuity of £1 payable at the end of *every* year, that the life x may enter, is $a_x + S_x$, this corresponds to P_n in equation (6).

Again, the *accumulated amount* of such an annuity by the end of the year in which life (x) may die would be $1 + \frac{a_x}{S_x}$; since it would consist of the last annuity payment + the improved amount of a_x, at the close of the duration of the life, which by proportion would be $\frac{a_x}{S_x}$; so that $1 + \frac{a_x}{S_x}$ corresponds to A_n in (6).

Then, since the analogy should subsist, the equation $\frac{1}{a_x + S_x} - \frac{1}{1 + \frac{a_x}{S_x}} = i$ must hold,

$$\text{whence } S_x = \frac{1 - i \, . \, a_x}{1 + i} \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (7)$$

which is the ordinary formula.

28.—The property in (6) can be remembered by the consideration that it expresses merely that

$$\left(\textit{The annuity for n years, which £1 would purchase}\right) - \left(\textit{The sinking fund to create £1 at the end of n years}\right) = \left(\textit{One year's interest.}\right)$$

TABLE I.

Shewing the *Decimal* corresponding to every Penny in the *Pound.*

s.	*d.*	Decimal.	*s.*	*d.*	Decimal.	*s.*	*d.*	Decimal.	*s.*	*d.*	Decimal.	*s.*	*d.*	Decimal.
0	1	.004	4	1	.204	8	1	.404	12	1	.604	16	1	.804
0	2	.008	4	2	.208	8	2	.408	12	2	.608	16	2	.808
0	3	.012	4	3	.212	8	3	.412	12	3	.612	16	3	.812
0	4	.017	4	4	.217	8	4	.417	12	4	.617	16	4	.817
0	5	.021	4	5	.221	8	5	.421	12	5	.621	16	5	.821
0	6	.025	4	6	*.225	8	6	.425	12	6	.625	16	6	.825
0	7	.029	4	7	.229	8	7	.429	12	7	.629	16	7	.829
0	8	.033	4	8	.233	8	8	.433	12	8	.633	16	8	.833
0	9	.037	4	9	.237	8	9	.437	12	9	.637	16	9	.837
0	10	.042	4	10	.242	8	10	.442	12	10	.642	16	10	.842
0	11	.046	4	11	.246	8	11	.446	12	11	.646	16	11	.846
1	0	.050	5	0	.250	9	0	.450	13	0	.650	17	0	.850
1	1	.054	5	1	.254	9	1	.454	13	1	*.654	17	1	*.854
1	2	.058	5	2	.258	9	2	.458	13	2	.658	17	2	.858
1	3	.062	5	3	.262	9	3	.462	13	3	.662	17	3	.862
1	4	.067	5	4	.267	9	4	.467	13	4	.667	17	4	.867
1	5	.071	5	5	.271	9	5	.471	13	5	.671	17	5	.871
1	6	*.075	5	6	.275	9	6	.475	13	6	.675	17	6	.875
1	7	.079	5	7	.279	9	7	.479	13	7	.679	17	7	.879
1	8	.083	5	8	.283	9	8	.483	13	8	.683	17	8	.883
1	9	.087	5	9	.287	9	9	.487	13	9	.687	17	9	.887
1	10	.092	5	10	.292	9	10	.492	13	10	.692	17	10	.892
1	11	.096	5	11	.296	9	11	.496	13	11	.696	17	11	.896
2	0	.100	6	0	.300	10	0	.500	14	0	.700	18	0	.900
2	1	.104	6	1	.304	10	1	.504	14	1	.704	18	1	.904
2	2	.108	6	2	.308	10	2	.508	14	2	.708	18	2	.908
2	3	.112	6	3	.312	10	3	.512	14	3	.712	18	3	.912
2	4	.117	6	4	.317	10	4	.517	14	4	.717	18	4	.917
2	5	.121	6	5	.321	10	5	.521	14	5	.721	18	5	.921
2	6	.125	6	6	.325	10	6	*.525	14	6	.725	18	6	.925
2	7	.129	6	7	.329	10	7	.529	14	7	.729	18	7	.929
2	8	.133	6	8	.333	10	8	.533	14	8	.733	18	8	.933
2	9	.137	6	9	.337	10	9	.537	14	9	.737	18	9	.937
2	10	.142	6	10	.342	10	10	.542	14	10	.742	18	10	.942
2	11	.146	6	11	.346	10	11	.546	14	11	.746	18	11	.946
3	0	.150	7	0	.350	11	0	.550	15	0	.750	19	0	.950
3	1	.154	7	1	.354	11	1	.554	15	1	*.754	19	1	*.954
3	2	.158	7	2	.358	11	2	.558	15	2	.758	19	2	.958
3	3	.162	7	3	.362	11	3	.562	15	3	.762	19	3	.962
3	4	.167	7	4	.367	11	4	.567	15	4	.767	19	4	.967
3	5	.171	7	5	.371	11	5	.571	15	5	.771	19	5	.971
3	6	.175	7	6	*.375	11	6	.575	15	6	.775	19	6	.975
3	7	.179	7	7	.379	11	7	.579	15	7	.779	19	7	.979
3	8	.183	7	8	.383	11	8	.583	15	8	.783	19	8	.983
3	9	.187	7	9	.387	11	9	.587	15	9	.787	19	9	.987
3	10	.192	7	10	.392	11	10	.592	15	10	.792	19	10	.992
3	11	.196	7	11	.396	11	11	.596	15	11	.796	19	11	.996
4	0	.200	8	0	.400	12	0	.600	16	0	.800	20	0	1.000

*** *Example.*—The value of the Decimal .075, is 1*s.* 6*d.*—.225, is 4*s.* 6*d.*—.375, is 7*s.* 6*d.*—.525, is 10*s.* 6*d.*—.654, is 13*s.* 1*d.*—.754, is 15*s.* 1*d.*—.854, is 17*s.* 1*d.*—.954, is 19*s.* 1*d.***

TABLE II.

(A.) *Shewing the sum per Pound to which a Rate of Interest per cent. is equivalent.*

				s.	*d.*	
2 per cent.	interest is	equal to	nearly	0	5	in the pound.
$2\frac{1}{2}$	,,	,,	exactly	0	6	,,
3	,,	,,	nearly	0	7	,,
$3\frac{1}{2}$	,,	,,	,,	0	$8\frac{1}{2}$	,,
4	,,	,,	,,	0	$9\frac{3}{4}$	,,
$4\frac{1}{2}$	,,	,,	,,	0	11	,,
5	,,	,,	exactly	1	0	,,
$5\frac{1}{2}$	,,	,,	nearly	1	$1\frac{1}{4}$	,,
6	,,	,,	,,	1	$2\frac{1}{2}$	,,
7	,,	,,	,,	1	5	,,
8	,,	,,	,,	1	$7\frac{1}{4}$	,,
9	,,	,,	,,	1	$9\frac{3}{4}$	,,
10	,,	,,	exactly	2	0	,,

(B.) *To calculate the Interest for One Year on any sum.*

If the rate be 2 per cent.	multiply the sum by .02 or $\frac{1}{50}$	and the product is the interest required.	
If $2\frac{1}{2}$,,	by .025 or $\frac{1}{40}$	,,	,,
If 3 ,,	by .03 or $\frac{3}{100}$	,,	,,
If $3\frac{1}{2}$,,	by .035 or $\frac{7}{200}$	,,	,,
If 4 ,,	by .04 or $\frac{1}{25}$	,,	,,
If $4\frac{1}{2}$,,	by .045 or $\frac{9}{200}$	,,	,,
If 5 ,,	by .05 or $\frac{1}{20}$	,,	,,
If 6 ,,	by .06 or $\frac{3}{50}$	,,	,,
If 7 ,,	by .07 or $\frac{7}{100}$	,,	,,
If 8 ,,	by .08 or $\frac{2}{25}$	,,	,,
If 9 ,,	by .09 or $\frac{9}{100}$	,,	,,
If 10 ,,	by .1 or $\frac{1}{10}$	,,	,,

REMARK.—To perform the above, it will be remembered that to multiply a quantity by a fraction it must be first multiplied by the numerator, and then the result divided by the denominator of the fraction. The division by 100 can be effected by dividing twice by 10. Similarly the other divisors can be separated, and the quotient obtained by successive divisions.

Example.—To find the interest for one year, at $3\frac{1}{2}$ per cent., on £19. 12*s*. 8*d*.

	£19.	12.	8
			7
2)	137.	8.	8
10)	68.	14.	4
10)	6.	17.	$5\frac{2}{10}$
Or the Interest required is		13.	$8\frac{92}{100}$

Table III. *can, by means of the following Formulæ, be made to give the results generally required from Tables of Discount or Annuities.*

1. Table VIII.	The *present value* of £1 due at the end of any number of years	is equal to	Unity divided by the *Amount*, in Table III., of £1 at the end of the same time
2. Table IX.	The *Amount* of an *Annuity* of £1 in any number of years	is equal to	The quotient of : (the *Amount* in Table III., of a *single pound* in the same time, less unity,) divided by (the rate of interest per pound) involved in the calculation.
3. Table X.	The *present value* of an Annuity of £1 for any number of years	is equal to	The quotient of unity *diminished* by the *present value* of a single pound, (due at the end of the same time) divided by the rate of interest per pound.*

4. Tables IX and X may be calculated from each other, if either be known by the property. *(Art.* 33 *Appendix to Treatise).*

that

$$\frac{1}{\text{Present Value of an Annuity.}} \text{ less } \frac{1}{\text{Amount of an Annuity.}} \text{ is equal to a year's interest.}$$

* [The present value required for the division being found from Table III., by the formula of (1).]

TABLE III.

***Shewing the Amount to which £1 Principal will increase at various Rates of Compound yearly Interest.** (See Table VI.)

At the end of Years.	3 per cent.	3¼ per cent.	3½ per cent.	3¾ per cent.	4 per cent.	4¼ per cent.	4½ per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	1.0300	1.0325	1.0350	1.0375	1.0400	1.0425	1.0450	1.0500	1.0600	1.0700	1.0800
2	1.0609	1.0660	1.0712	1.0764	1.0816	1.0868	1.0920	1.1025	1.1236	1.1449	1.1664
3	1.0927	1.1007	1.1087	1.1167	1.1248	1.1329	1.1411	1.1576	1.1910	1.2250	1.2597
4	1.1255	1.1364	1.1475	1.1586	1.1698	1.1811	1.1925	1.2155	1.2624	1.3107	1.3604
5	1.1592	1.1734	1.1876	1.2021	1.2166	1.2313	1.2461	1.2762	1.3382	1.4025	1.4693
6	1.1940	1.2115	1.2292	1.2471	1.2653	1.2836	1.3022	1.3400	1.4185	1.5007	1.5868
7	1.2298	1.2509	1.2722	1.2939	1.3159	1.3382	1.3608	1.4071	1.5036	1.6057	1.7138
8	1.2667	1.2915	1.3168	1.3424	1.3685	1.3951	1.4221	1.4774	1.5938	1.7181	1.8509
9	1.3047	1.3335	1.3628	1.3928	1.4233	1.4544	1.4860	1.5513	1.6894	1.8384	1.9990
10	1.3439	1.3768	1.4105	1.4450	1.4802	1.5162	1.5529	1.6288	1.7908	1.9671	2.1589
11	1.3842	1.4216	1.4599	1.4992	1.5394	1.5806	1.6228	1.7103	1.8982	2.1048	2.3316
12	1.4257	1.4678	1.5110	1.5554	1.6010	1.6478	1.6958	1.7958	2.0121	2.2521	2.5181
13	1.4685	1.5155	1.5639	1.6137	1.6650	1.7178	1.7721	1.8856	2.1329	2.4098	2.7196
14	1.5125	1.5648	1.6186	1.6743	1.7316	1.7908	1.8519	1.9799	2.2609	2.5785	2.9371
15	1.5579	1.6156	1.6753	1.7370	1.8009	1.8669	1.9352	2.0789	2.3965	2.7590	3.1721
16	1.6047	1.6681	1.7339	1.8022	1.8729	1.9463	2.0223	2.1828	2.5403	2.9521	3.4259
17	1.6528	1.7223	1.7946	1.8698	1.9479	2.0290	2.1133	2.2920	2.6927	3.1588	3.7000
18	1.7024	1.7783	1.8574	1.9399	2.0258	2.1152	2.2084	2.4066	2.8543	3.3799	3.9960
19	1.7535	1.8361	1.9225	2.0126	2.1068	2.2051	2.3078	2.5269	3.0255	3.6165	4.3157
20	1.8061	1.8958	1.9897	2.0881	2.1911	2.2989	2.4117	2.6532	3.2071	3.8696	4.6609
21	1.8602	1.9574	2.0594	2.1664	2.2787	2.3966	2.5202	2.7859	3.3995	4.1405	5.0338
22	1.9161	2.0210	2.1315	2.2477	2.3699	2.4984	2.6336	2.9252	3.6035	4.4304	5.4365
23	1.9735	2.0867	2.2061	2.3319	2.4647	2.6046	2.7521	3.0715	3.8197	4.7405	5.8714
24	2.0327	2.1545	2.2833	2.4194	2.5633	2.7153	2.8760	3.2250	4.0489	5.0723	6.3411
25	2.0937	2.2245	2.3632	2.5101	2.6658	2.8307	3.0054	3.3863	4.2918	5.4274	6.8484

* See Art. 20, page 15, also Section 2, Appendix to Treatise, for the extension of this Table to any number of years beyond 25.

TABLE IV.

Shewing the Rates of Interest payable only once *a year, which are equivalent to* nominal *annual Rates of Interest actually paid at frequent intervals in each year. Art.* 5, *Appendix to Treatise.*

Nominal annual rate per cent.	Real yearly interest, to which the nominal rates are equivalent when paid:— Yearly.	Half-yearly.	Quarterly.	Monthly.	Momently.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
3 per cent.	3 0 0	3 0 5½	3 0 8¼	3 0 10	3 0 11
4 per cent.	4 0 0	4 0 9¾	4 1 2½	4 1 6	4 1 7¾
5 per cent.	5 0 0	*5 1 3	5 1 10¾	5 2 4	5 2 6½
6 per cent.	6 0 0	6 1 9¾	6 2 8¾	6 3 4	6 3 8¼
7 per cent.	7 0 0	7 2 5½	7 3 8¾	7 4 7	7 5 0¼
8 per cent.	8 0 0	8 3 2½	8 4 10½	8 6 0	8 6 7

* *Example.*—If a person receives interest half-yearly, after the *nominal* annual rate of 5 per cent., the actual interest derived by him by one year's investment is £5. 1*s.* 3*d.*

TABLE V.

Shewing the nominal annual Rates of Interest paid momently, *which are equivalent to rates paid at the* end *of each year. Art.* 6, *Appendix to Treatise.*

Yearly rate.	Corresponding momentaneous rate.		Yearly rate.	Corresponding momentaneous rate.	
		£. s. d.			£. s. d.
2 per cent.	£1.9802 or	1 19 7½	7 per cent.	£6.7658 or	6 15 4
3 „	2.9558	2 19 1¼	8 „	7.6791	7 13 11¼
4 „	3.9220	3 18 5½	9 „	8.6177	8 12 4¼
5 „	4.8790	*4 17 7	10 „	9.5310	9 10 7½
6 „	5.8268	5 16 6½			

* *Example.*—The amount to which a sum of money will accumulate in any number of years at *yearly* interest 5 per cent. is the same as the amount to which it would accumulate at *momentaneous* interest, after the nominal annual rate of 4*l.* 17*s.* 7*d.* per cent.

TABLE VI.

Shewing the Amount to which £1 will increase at Compound Interest, according as it is paid yearly, half-yearly, quarterly, or momently. [*See Table III.*]

Nominal rate of Interest.	Payable.	The Amount of £1 in			
		1 Year.	5 Years.	25 Years.	50 Years.
3 per cent.	yearly	1.03000	1.15927	2.09378	4.38391
	half-yearly	1.03022	1.16054	2.10524	4.43204
	quarterly	1.03034	1.16119	2.11108	4.45667
	momently	1.03045	1.16183	2.11700	4.48169
4 per cent.	yearly	1.04000	1.21665	2.66584	7.10668
	half-yearly	1.04040	1.21899	2.69159	7.24465
	quarterly	1.04060	1.22019	2.70481	7.31602
	momently	1.04081	1.22140	2.71828	7.38906
5 per cent.	yearly	1.05000	1.27628	3.38634	11.46740
	half-yearly	1.05062	1.28008	3.43711	11.81372
	quarterly	1.05095	1.28204	3.46340	11.99517
	momently	1.05127	1.28402	3.49034	12.18249
6 per cent.	yearly	1.06000	1.33823	4.29187	18.42015
	half-yearly	1.06090	1.34392	4.38391	19.21863
	quarterly	1.06136	1.34685	4.43204	19.64303
	momently	1.06184	1.34986	4.48169	20.08553
7 per cent.	yearly	1.07000	1.40255	5.42743	29.45703
	half-yearly	1.07122	1.41060	5.58493	31.19141
	quarterly	1.07186	1.41478	5.66816	32.12799
	momently	1.07251	1.41907	5.75460	33.11545
8 per cent.	yearly	1.08000	1.46933	6.84847	46.90161
	half-yearly	1.08160	1.48024	7.10668	50.50495
	quarterly	1.08243	1.48595	7.24465	52.48490
	momently	1.08329	1.49182	7.38906	54.59815

TABLE VII.

Time in which Money will double itself at Simple or Compound yearly Interest. (*See Arts.* 12—15, *in the Appendix to Treatise for the theorem relative to the number* 70.)

Rate Per cent.		At Simple Interest.	At Compound Interest.		
		Years.	Years.	Years.	Days.
2	£1 or any other sum will double itself in	50.0000	35.00278878 =	35	2
2½		40.0000	28.07103453 =	28	26
3		33.3333	23.44977225 =	23	165
3½		28.5714	20.14879168 =	20	55
4		25.0000	17.67298769 =	17	246
4½		22.2222	15.74730184 =	15	272
5		20.0000	14.20669908 =	14	76
6		16.6666	11.89566105 =	11	327
7		14.2857	10.24476835 =	10	90
8		12.5000	9.00646834 =	9	3
9		11.1111	8.04323173 =	8	16
10		10.0000	7.27254090 =	7	100

TABLE VIII.

Shewing the present Value of £1 payable at the end of any number of Years, at various Rates of Interest.

This Table will serve to determine the *present value* of Investing shares in a Society, or the sum which must be given at once to obtain a *paid up* share, which is to be received at the end of a specified number of years.

Years.	3 per cent.	3¼ per cent.	3½ per cent.	3¾ per cent.	4 per cent.	4¼ per cent.	4½ per cent.	4¾ per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	.9708	.9685	.9661	.9638	.9615	.9592	.9569	.9546	.9523	.9433	.9345	.9259
2	.9425	.9380	.9335	.9290	.9245	.9201	.9157	.9113	.9070	.8899	.8734	.8573
3	.9151	.9085	.9019	.8954	.8889	.8826	.8762	.8700	.8638	.8396	.8162	.7938
4	.8884	.8799	.8714	.8630	.8548	.8466	.8385	.8305	.8227	.7920	.7628	.7350
5	.8626	.8522	.8419	.8318	.8219	.8121	.8024	.7929	.7835	.7472	.7129	.6805
6	.8374	.8253	.8135	.8018	.7903	.7790	.7678	.7569	.7462	.7049	.6663	.6301
7	.8130	.7994	.7859	.7728	.7599	.7472	.7348	.7226	.7106	.6650	.6227	.5834
8	.7894	.7742	.7594	.7448	.7306	.7167	.7031	.6898	.6768	.6274	.5820	.5402
9	.7664	.7498	.7337	.7179	.7025	.6875	.6729	.6585	.6446	.5918	.5439	.5002
10	.7440	.7262	.7089	.6920	.6755	.6595	.6439	.6287	*.6139	.5583	.5083	.4631
11	.7224	.7034	.6849	.6670	.6495	.6326	.6161	.6002	.5846	.5267	.4750	.4288
12	.7013	.6812	.6617	.6428	.6245	.6068	.5896	.5729	.5568	.4969	.4440	.3971
13	.6809	.6598	.6394	.6196	.6005	.5821	.5642	.5470	.5303	.4688	.4149	.3676
14	.6611	.6390	.6177	.5972	.5774	.5583	.5399	.5222	.5050	.4423	.3878	.3404
15	.6418	.6189	.5968	.5756	.5552	.5356	.5167	.4985	.4810	.4172	.3624	.3152

* *Example.*—If a member of a Society desire to purchase by a single payment an Investing share whose amount is £100, to be received at the end of 10 years, and the rate of interest be 5 per cent, he must pay £61.39 or £61. 7*s.* 11*d.* for the same; a modification of course being made in the case of *monthly* payments.

[*Refer to the Remarks No. 1, appended to Table III, for any time beyond 25 years.*]

TABLE IX.

[illegible]

Showing the amount to which an Annuity of £1, paid at the end of each year, will accumulate at Compound Interest.

This Table will serve to determine the yearly subscription requisite to purchase an unvarying share in a Society.

Year	3 per cent.	3¼ per cent.	3½ per cent.	3¾ per cent.	4 per cent.	4½ per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.	9 per cent.	10 per cent.
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0300	2.0325	2.0350	2.0375	2.0400	2.0450	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000
3	3.0909	3.0988	3.1062	3.1139	3.1216	3.1370	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100
4	4.1836	4.1982	4.2149	4.2306	4.2464	4.2781	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410
5	5.3091	5.3357	5.3624	5.3893	5.4163	5.4707	5.5256	5.6370	5.7507	5.8666	5.9847	6.1051
6	6.4684	6.5091	6.5501	6.5914	6.6329	6.7168	6.8019	6.9753	7.1532	7.3359	7.5233	7.7156
7	7.6625	7.7206	7.7794	7.8386	7.8982	8.0191	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872
8	8.8923	8.9718	9.0516	9.1325	9.2142	9.3800	9.5491	9.8974	10.2598	10.6366	11.0285	11.4359
9	10.1591	10.2631	10.3684	10.4750	10.5827	10.8021	11.0265	11.4913	11.9779	12.4876	13.0210	13.5795
10	11.4638	11.5967	11.7313	11.8678	12.0061	12.2882	12.5778	13.1807	13.8164	14.4866	15.1929	15.9374
11	12.8077	12.9736	13.1419	13.3128	13.4863	13.8411	*14.2067	14.9716	15.7836	16.6454	17.5603	18.5312
12	14.1920	14.3952	14.6019	14.8121	15.0258	15.4640	15.9171	16.8699	17.8884	18.9771	20.1407	21.3843
13	15.6177	15.8631	16.1130	16.3675	16.6268	17.1599	17.7129	18.8821	20.1406	21.4953	22.9534	24.5227
14	17.0863	17.3786	17.6769	17.9813	18.2919	18.9321	19.5986	21.0150	22.5504	24.2149	26.0192	27.9750
15	18.5989	18.9434	19.2956	19.6556	20.0235	20.7840	21.5785	23.2759	25.1290	27.1521	29.3609	31.7724

[Note.—The above Table will also serve to determine the amount of an annuity paid at the *beginning* of each year.

For the amount of an annuity for n years paid at the *beginning* of each year $=$ the amount of an annuity for $(n+1)$ years from above table -1.

* *Example.*—The amount of an Annuity of £1 at 5 per cent. for 10 years paid at the beginning of each year = £14.2067 − £1 = £13.2067.]

TABLE X.

[See Remarks, No. 3., appended to Table III.]

Shewing the present Value of an Annuity of £1, paid at the end *of each Year.*

Years.	3 per cent.	$3\frac{1}{4}$ per cent.	$3\frac{1}{2}$ per cent.	$3\frac{3}{4}$ per cent.	4 per cent.	$4\frac{1}{2}$ per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	.9708	.9685	.9661	.9638	.9615	.9569	.9523	.9433	.9345	.9259
2	1.9134	1.9065	1.8996	1.8928	1.8860	1.8726	1.8594	1.8333	1.8080	1.7832
3	2.8286	2.8150	2.8016	2.7883	2.7750	2.7489	2.7232	2.6730	2.6243	2.5770
4	3.7170	3.6949	3 6730	3.6513	3.6298	3.5875	3.5459	3.4651	3.3872	3.3121
5	4.5797	4.5471	4.5150	4.4832	4.4518	4.3899	4.3294	4.2123	4.1001	3.9927
6	5.4171	5.3725	5.3285	5.2850	5.2421	5.1578	5.0756	4 9173	4.7665	4.6228
7	6.2302	6.1720	6.1145	6.0578	6.0020	5.8927	5.7863	5.5823	5.3892	5.2063
8	7.0196	6.9462	6.8739	6.8027	6 7327	6.5958	6.4632	6.2097	5.9712	5.7466
9	7.7861	7.6961	7.6076	7.5207	7.4353	7.2687	*7.1078	6.8016	6.5152	6.2468
10	8.5302	8.4223	8.3166	8.2127	8.1108	7.9127	7.7217	7.3600	7.0235	6.7100
11	9.2526	9.1258	9.0015	8.8797	8.7604	8.5289	8.3064	7.8868	7.4986	7.1389
12	9.9540	9.8070	9.6633	9.5226	9.3850	9.1185	8.8632	8.3838	7.9426	7.5360
13	10.6349	10 4669	10.3027	10.1423	9.9856	9.6828	9.3935	8.8526	8.3576	7.9037
14	11.2960	11.1059	10.9205	10.7396	10.5631	10.2228	9.8989	9.2949	8.7454	8.2442
15	11.9379	11.7248	11.5174	11.3152	11.1183	10.7395	10.3796	9.7122	9.1079	8.5594

[NOTE.—The above Table will serve to determine the present value of an Annuity paid at the *beginning* of each year, For, the present value of an annuity of £1, paid at the beginning of each year, for *n* years $\Big\} = \Big\{$ the present value of an annuity for $(n-1)$ years + 1.

**Example.*—The present value at 5 per cent. of £1 a year paid at the beginning of each year for ten years = £7.1078 + £1 = £8.1078]

TABLE IX.

[See Remarks, No. 2, appended to Table III.]

Shewing the Amount to which an Annuity of £1, paid at the end *of each year, will accumulate at Compound Interest.*

This Table will serve to determine the yearly subscription requisite to purchase an investing share in a Society.

[illegible]rs.	3 per cent.	$3\frac{1}{4}$ per cent.	$3\frac{1}{2}$ per cent.	$3\frac{3}{4}$ per cent.	4 per cent.	$4\frac{1}{2}$ per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.	9 per cent.	10 per cent.
[illegible]	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
[illegible]	2.0300	2.0325	2.0350	2.0375	2.0400	2.0450	2.0500	2 0600	2.0700	2.0800	2.0900	2.1000
3	3.0909	3.0985	3.1062	3.1139	3.1216	3.1370	3.1525	3.1836	3.2149	3·2464	3.2781	3.3100
4	4.1836	4.1992	4.2149	4.2306	4.2464	4.2781	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410
5	5.3091	5.3357	5.3624	5.3893	5.4163	5.4707	5.5256	5.6370	5.7507	5.8666	5.9847	6.1051
6	6.4684	6.5091	6.5501	6.5914	6.6329	6.7168	6.8019	6.9753	7.1532	7.3359	7.5233	7.7156
7	7.6624	7.7206	7.7794	7.8386	7.8982	8.0191	8,1420	8.3938	8.6540	8.9228	9.2004	9.4871
8	8.8923	8.9718	9.0516	9.1325	9.2142	9.3800	9.5491	9.8974	10.2598	10.6366	11.0284	11.4358
9	10.1591	10.2631	10.3684	10.4750	10.5827	10.8021	11 0265	11.4913	11.9779	12.4875	13.0210	13.5794
10	11.4638	11.5967	11.7313	11.8678	12.0061	12.2882	12.5778	13.1807	13.8164	14.4865	15.1929	15.9374
11	[illegible].8077	12.9736	13.1419	13.3128	13.4863	13.8411	•14.2067	14.9716	15.7835	16.6454	17.5602	18.5311
12	[illegible]	14.3952	14.6019	14.8121	15.0258	15.4640	15.9171	16.8699	17.8884	18.9771	20.1407	21.3842
13	[illegible]	15.8631	16.1130	16.3675	16.6268	17.1599	17.7129	18.8821	20.1406	21.4952	22.9533	24.5227
14		17.3786	17.6769	17.9813	18.2919	18.9321	19.5986	21.0150	22.5504	24.2149	26.0191	27.9749
15		18.9434	19.2956	19.6556	20.0235	20.7840	21.5785	23.2759	25.1290	27.1521	29.3609	21.7724

[illegible] above Table will also serve to determine the amount of an annuity paid at the *beginning* of each year.

[illegible]he amount of an annuity for *n* years paid at the *beginning* of each year. = the amount of an annuity for $(n+1)$ years from above table — 1.

[illegible] of an Annuity of £1 at 5 per cent. for 10 years paid at the beginning of each year = £14.2067—£1.
= £13.2067.]

TABLE X.

[See Remarks, No. 3., appended to Table III.]

Shewing the present Value of an Annuity of £1, paid at the end *of each Year.*

Years.	3 per cent.	3¼ per cent.	3½ per cent.	3¾ per cent.	4 per cent.	4½ per cent.	5 per cent.	6 per cent.	7 per cent.	8 per cent.
1	.9708	.9685	.9661	.9638	.9615	.9569	.9523	.9433	.9345	.9259
2	1.9134	1.9065	1.8996	1.8928	1.8860	1.8726	1.8594	1.8333	1.8080	1.7832
3	2.8286	2.8150	2.8016	2.7883	2.7750	2.7489	2.7232	2.6730	2.6243	2.5770
4	3.7170	3.6949	3 6730	3.6513	3.6298	3.5875	3.5459	3.4651	3.3872	3.3121
5	4.5797	4.5471	4.5150	4.4832	4.4518	4.3899	4.3294	4.2123	4.1001	3.9927
6	5.4171	5.3725	5.3285	5.2850	5.2421	5.1578	5.0756	4 9173	4.7665	4.6228
7	6.2302	6.1720	6.1145	6.0578	6.0020	5.8927	5.7863	5.5823	5.3892	5.2063
8	7.0196	6.9462	6.8739	6.8027	6 7327	6.5958	6.4632	6.2097	5.9712	5.7466
9	7.7861	7.6961	7.6076	7.5207	7.4353	7.2687	*7.1078	6.8016	6.5152	6.2468
10	8.5302	8.4223	8.3166	8.2127	8.1108	7.9127	7.7217	7.3600	7.0235	6.7100
11	9.2526	9.1258	9.0015	8.8797	8.7604	8.5289	8.3064	7.8868	7.4986	7.1389
12	9.9540	9.8070	9.6633	9.5226	9.3850	9.1185	8 8632	8.3838	7.9426	7.5360
13	10.6349	10 4669	10.3027	10.1423	9.9856	9.6828	9.3935	8.8526	8.3576	7.9037
14	11.2960	11.1059	10.9205	10.7396	10.5631	10.2228	9.8989	9.2949	8.7454	8.2442
15	11.9379	11.7248	11.5174	11.3152	11.1183	10.7395	10.3796	9.7122	9.1079	8.5594

[NOTE.—The above Table will serve to determine the present value of an Annuity paid at the *beginning* of each year,

For, the present value of an annuity of £1, paid at the beginning of each year, for *n* years $\Big\} = \Big\{$ the present value of an annuity for $(n-1)$ years + 1.

* *Example.*—The present value at 5 per cent. of £1 a year paid at the beginning of each year for ten years = £7.1078 + £1 = £8.1078]

TABLE XI.

Shewing the Annuity which £1 will purchase for a given number of Years.

This Table will serve to determine the Annuity to be paid by a borrowing member of a Society in repayment of a given advance.

Years.	3 per cent.	4 per cent.	5 per cent.	6 per cent.	7 per cent	8 per cent.	9 per cent.	10 per cent.
1	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000
2	.5226	.5302	.5378	.5454	.5531	.5608	.5685	.5762
3	.3535	.3603	.3672	.3741	.3811	.3880	.3951	.4021
4	.2690	.2755	.2820	.2886	.2952	.3019	.3087	.3155
5	.2184	.2246	.2310	.2374	.2439	.2505	.2571	.2638
6	.1846	.1908	.1970	.2034	.2098	.2163	.2229	.2296
7	.1605	.1666	.1728	.1791	.1856	.1921	.1987	.2054
8	.1425	.1485	.1547	.1610	.1675	.1740	.1807	.1874
9	.1284	.1345	.1407	.1470	.1535	.1601	.1668	.1736
10	.1172	.1233	.1295	.1359	*.1424	.1490	.1558	.1627
11	.1081	.1141	.1204	.1268	.1334	.1401	.1469	.1540
12	.1005	.1066	.1128	.1193	.1259	.1327	.1397	.1468
13	.0940	.1001	.1065	.1130	.1197	.1265	.1336	.1408
14	.0885	.0947	.1010	.1076	.1143	.1213	.1284	.1358
15	.0837	.0899	.0963	.1030	.1098	.1168	.1241	.1315

* *Eample.*—If a member borrow £100 for 10 years to be repaid by equal instalments, including principal and interest, at 7 per cent., in that time, he must pay £14.24 or nearly £14. *5s.* a year in repayment for the same.

☞ *From this Table may, also, be calculated the* annual sinking fund *to accumulate to* £100 *in any number of years. Ex: The sinking fund to produce* £100 *in* 12 *years at* 5 *per cent. is equal to* £11.28, less the interest, *or to* £6.28, *which is* £6. 5s. 8d. *nearly.* (See also Art. 33 Appendix).

* TABLE XII.

Extract from the Tables of Hyperbolic Logarithms.

Number.	Logarithms.	Number.	Logarithms.
1.01	.0099503	2.00	.6931472
1.02	.0198026	3.00	1.0986123
1.03	.0295588	4.00	1.3862943
1.04	.0392207	5.00	1.6094379
1.05	.0487902	6.00	1.7917594
1.06	.0582689	7.00	1.9459101
1.07	.0676586	8.00	2.0794415
1.08	.0769610	9.00	2.1972245
1.09	.0861777	10.00	2.3025851
1.10	.0953102		

Rem.—Hyperbolic Logarithms can be deduced from the ordinary tables of Logarithms to the base 10, by multiplying the latter by Log_e 10 or 2.302851.

* See Callet's Logarithms.—*Firmin Didot, Paris.*

TABLE XIII.

Extract from the English Life Table, 5th Report of the Registrar General.

[*Interpolated by applying the differential Method to the Logarithms of the probability of living a year; in two series,—the first extending from* 15 *to* 55 *in the Table of Males and from* 15 *to* 54 *in the Table of Females, the second series from* 56 *and* 55 *to the end of life.*]

Age.	Living.	Males.	Females.	Age.	Living.	Males.	Females.
0	100,000	51,274	48,726	35	57,173	28,868	28,305
1	85,369	43,104	42,265	40	53,824	27,145	26,679
2	80,102	40,388	39,714	45	50,300	25,311	24,989
3	77,392	39,018	38,374	50	46,620	23,377	23,243
4	75,539	38,064	37,475	55	42,812	21,361	21,451
5	74,201	37,385	36,816	60	37,998	18,808	19,190
6	73,154	36,843	36,311	65	31,854	15,590	16,264
7	72,320	36,411	35,909	70	24,532	11,824	12,708
8	71,644	36,065	35,579	75	16,659	7,868	8,791
9	71,081	35,787	35,294	80	9,382	4,316	5,066
10	70,612	35,564	35,048	85	4,010	1,786	2,224
15	68,628	34,574	34,054	90	1,150	492	658
20	66,061	33,324	32,737	95	188	77	111
25	63,296	31,958	31,338	100	13	5	8
30	60,333	30,473	29,860	105	.3	.1	.2

TABLE XIV.

Extract from the Tables of Rates of Mortality at Northampton, Carlisle, the Equitable Insurance Office, and according to the Observations of Des Parcieux.

Age.	Northampton Living.	Carlisle. Living.	Des Parcieux. Living.	Equitable. Living.	Age.	Northampton Living.	Carlisle Living.	Des Parcieux. Living.	Equitable. Living
0	11650	10000			35	4010	5362	694	2374
1	8650	8461			40	3635	5075	657	2236
2	7283	7779			45	3248	4727	622	2093
3	6781	7274	1000		50	2857	4397	581	1937
4	6446	6998	970		55	2448	4073	526	1744
5	6249	6797	948		60	2038	3643	463	1524
6	6065	6676	930		65	1632	3018	395	1288
7	5925	6594	915		70	1232	2401	310	1028
8	5815	6536	902		75	832	1675	211	752
9	5735	6493	890		80	469	953	118	480
10	5675	6460	880	2844	85	186	445	48	224
15	5423	6300	848	2785	90	46	142	11	65
20	5132	6090	814	2705	95	4	30	0	9
25	4760	5879	774	2611	100		9		
30	4385	5642	734	2501					

TABLE XV.

Present Values of Annuities on Single Lives according to the Carlisle Table of Mortality.

(See Deposit Life Assurance Formulæ in the Appendix, page 9.)

Age.	3 per cent.	4 per cent.	Age.	3 per cent.	4 per cent.
0	17.320	14.28164	35	18.433	16.04123
1	20.085	16.55455	40	17.143	15.07363
2	21.501	17.72616	45	15.863	14.10460
3	22.683	18.71508	50	14.303	12.86902
4	23.285	19.23133	55	12.408	11.29961
5	23.693	19.59203	60	10.491	9.66333
6	23.846	19.74502	65	8.917	8.30719
7	23.867	19.79019	70	7.123	6.70936
8	23.801	19.76443	75	5.512	5 23901
9	23.677	19.69114	80	4.365	4.18289
10	23.512	19.58339	85	3.229	3.11515
15	22.582	18.95534	90	2.499	2.41621
20	21.694	18.36170	95	2.757	2.67433
25	20.665	17.64486	100	1.683	1.65282
30	19.556	16.85215			

[Other practical Tables will be found dispersed throughout the Work, for which see the Contents.]

DEPOSIT TABLES.

DEPOSIT TABLES.

THE following Tables * are given in illustration of the system propounded by the author in the Appendix. This system was proposed with a view to give a Depositor a greater average rate of interest for his investment than that afforded by Savings' Banks, and at the same time to afford facilities for the withdrawal, at will, of a pre-arranged portion of the Deposit. The sum deposited is accordingly divided, in the outset into two portions, one of which has been supposed to be withdrawable at a week's notice, the other at not less than six months. The latter portion, therefore, not being liable to abrupt withdrawal, can be invested at a higher rate of interest than the former. On this account two rates of interest are employed in the calculations, as will be seen on reference to the Tables. It is also a condition of the investment that the accruing *compound* interest thereon shall not be withdrawn until the withdrawal of the whole of the Deposit, an equivalent for this restriction being given in the investment from year to year, at the *higher* rate, of the total amount of each year's interest on the two portions of the Deposit. The portions assumed in the Tables will probably, in most cases, be found sufficient, with care, to meet any ordinary contingency; and the delay which occurs in the removal of the remainder will operate beneficially as a check to hasty and reckless withdrawals. These preliminary observations will suffice to explain the system, and we now proceed to describe the arrangement of the Tables.

I. SINGLE DEPOSITS.

These consist of Tables I. to VI. inclusive, all of which are computed upon the same principle, but at different rates of interest. (*Formula* 1, *Art.* 3, *Appendix.*) The rates employed are cited at the head of each Table, and it is presumed that the headings and foot notes will be found sufficiently explanatory.

II. ANNUITY DEPOSITS.

These consist of Tables VII. to XII. inclusive, and show the result of a series of annual Deposits. It will be perceived that these Tables are

* These Tables have been prepared and arranged by Mr. Alexander Colvin, (Assistant Actuary,) of 54, Charing Cross.

computed at the same rates, respectively, as the previous six Tables. They are, in fact, obtained from those Tables by addition.

III. Deferred Annuities.

These consist of Tables XIII., XIV. and XV., and are an adaptation of the principles developed in Tables I., II. and III., to the purchase of Deferred Annuities. The attention of the reader is particularly requested to these Tables. It will be perceived that the money deposited accumulates during the stipulated period without any reference to a law of mortality. The consequence of this is that a Depositor, who may, from any cause, find it advisable to withdraw before attaining the stipulated age, will receive a much larger sum, under these Tables, than he would under any other system of Deferred Annuities hitherto proposed. It is true that, were the same amount to be deposited in a Savings' Bank in purchase of an annuity, the *resulting annuity* would be somewhat larger than these Tables give; but, viewed as a *whole*, it is conceived that the plan herein delineated is much more advantageous. Thus a man at 30, who deposits £10 in a Savings' Bank, will at 60 obtain an annuity of £2. 19*s*. 7*d*.; whereas, Table XIII. would give him but £2. 11*s*. 11*d*. Suppose, however, that at the age of 55 he should withdraw or die, then he or his representatives would receive, under the abovementioned Table XIII., the sum of £22. 13*s*. 2*d*. The Savings' Bank would merely return the £10.

Note.—*The reader will observe, on examining the Tables, that the Columns relating to Deposits of* £100 *are not, in all cases,* exactly *ten times the amount of the corresponding value for Deposits of* £10. *These discrepancies are occasioned by the suppression of fractional parts of a penny.*

SINGLE DEPOSITS.

TABLE I.

Showing the Amount to which a Deposit of £10 (or £100) will accumulate at the end of any number of Years up to 10; on the condition that, after the first Year, One Half (or One Fourth) of the Sum deposited may be withdrawn, *without Interest*, on giving one week's notice; the balance of the Deposit and the accumulated compound Interest remaining unwithdrawable till the end of the period, unless six months' notice of withdrawal be given.

Rates of Interest £3. 10*s*. and £2. 10*s*. per Cent., as explained at foot.

	Deposit of £10.						Deposit of £100.						
No. of Years.	One Half withdrawable.			One Fourth withdrawable.			One Fourth withdrawable.			One Half withdrawable.			No. of Years.
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	
1	10	6	0	10	6	6	103	5	0	103	0	0	1
2	10	12	2	10	13	3	106	12	4	106	2	1	2
3	10	18	8	11	0	2	110	1	11	109	6	5	3
4	11	5	3	11	7	5	113	13	11	112	12	11	4
5	11	12	2	11	14	10	117	8	7	116	1	9	5
6	11	19	4	12	2	7	121	5	9	119	13	0	6
7	12	6	8	12	10	7	125	5	8	123	6	9	7
8	12	14	4	12	18	10	129	8	4	127	3	1	8
9	13	2	3	13	7	5	133	14	0	131	2	1	9
10	13	10	5	13	16	3	138	2	7	135	3	11	10

N.B. This Table is computed according to formula No. I., Art. 3, in the Appendix, on the supposition that the *lower* rate of 2½ per cent. is allowed on the withdrawable portion of the Deposit, and 3½ per cent. on the unwithdrawable portion, as also upon the entire amount of the interest as it accumulates from year to year.

Example.—A person having deposited £100 will be entitled, at any time after the first year to draw out £50, or £25, as the case may be, at a week's notice. Say he has retained the power to withdraw one-half, and that he exercises this power at the end of the 5th year. The amount at his credit at that moment is £116. 1*s*. 9*d*., from which deducting the £50 withdrawn, there will remain £66. 1*s*. 9*d*. to accumulate for the remaining 5 years (or until withdrawn under a six months' notice) at 3½ per cent. compound interest. If, on the other hand, the whole amount of the Deposit be left undisturbed by the Depositor during the term, then the accumulated amount at the end of 10 years will be £135. 3*s*. 11*d*.

TABLE II.

Showing the Amount to which a Deposit of £10 (or £100) will accumulate at the end of any number of Years up to 10, on the principle of Table I.

Rates of Interest £3. 5*s*. and £2. 10*s*. per Cent.

	Deposit of £10		Deposit of £100.		
No. of Years.	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. s. d.	£. s. d.	£ s. d.	£. s. d.	
1	10 5 9	10 6 2	103 1 3	102 17 6	1
2	10 11 8	10 12 5	106 4 6	105 16 10	2
3	10 17 10	10 19 0	109 9 9	108 18 2	3
4	11 4 2	11 5 9	112 17 3	112 1 6	4
5	11 10 8	11 12 8	116 6 9	115 6 9	5
6	11 17 5	11 19 10	119 18 8	118 14 3	6
7	12 4 5	12 7 3	123 12 10	122 3 11	7
8	12 11 7	12 14 11	127 9 6	125 15 10	8
9	12 19 0	13 2 11	131 8 7	129 10 0	9
10	13 6 8	13 11 0	135 10 3	133 6 9	10

N.B. The observations at the foot of Table I. apply in a similar manner to the results of this Table.

TABLE III.

Showing the Amount to which a Deposit of £10 (or £100) will accumulate at the end of any number of Years up to 10, on the principle of Table I.

Rates of Interest £3. 2*s*. 6*d*. and £2. 10*s*. per Cent.

	Deposit of £10.		Deposit of £100.		
No. of Years.	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	
1	10 5 7	10 5 11	102 19 4	102 16 3	1
2	10 11 5	10 12 1	106 0 8	105 14 3	2
3	10 17 5	10 18 4	109 3 9	108 14 1	3
4	11 3 7	11 4 11	112 8 10	111 15 9	4
5	11 9 11	11 11 7	115 16 0	114 19 4	5
6	11 16 6	11 18 6	119 5 3	118 5 0	6
7	12 3 3	12 5 8	122 16 8	121 12 7	7
8	12 10 3	12 13 0	126 10 3	125 2 5	8
9	12 17 5	13 0 7	130 6 3	128 14 4	9
10	13 4 10	13 8 6	134 4 7	132 8 7	10

N.B. The observations at the foot of Table I. apply in a similar manner to the results of this Table.

TABLE IV.

Showing the Amount to which a Deposit of £10 (or £100) will accumulate at the end of any number of Years up to 10, on the principle of Table I.

Rates of Interest 5 and 3 per Cent.

	Deposit of £10.		Deposit of £100.		
No of Years.	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	
1	10 8 0	10 9 6	104 10 0	104 0 0	1
2	10 16 5	10 18 5	109 4 6	108 4 0	2
3	11 5 2	11 8 5	114 3 9	112 12 2	3
4	11 14 6	11 18 9	119 7 11	117 4 10	4
5	12 4 3	12 9 9	124 17 4	122 2 1	5
6	12 14 5	13 1 3	130 12 2	127 4 2	6
7	13 5 1	13 13 3	136 12 9	132 11 4	7
8	13 16 5	14 5 11	142 19 5	138 3 11	8
9	14 8 2	14 19 3	149 12 5	144 2 1	9
10	15 0 8	15 13 2	156 12 0	150 6 3	10

N.B. The observations at the foot of Table I. apply in a similar manner to the results of this Table.

TABLE V.

Showing the Amount to which a Deposit of £10 (or £100) will accumulate at the end of any number of Years up to 10, on the principle of Table I.

Rates of Interest 6 and 3 per Cent.

	Deposit of £10.		Deposit of £100.		
No. of Years	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	
1	10 9 0	10 10 6	105 5 0	104 10 0	1
2	10 18 6	11 1 8	110 16 3	109 5 5	2
3	11 8 8	11 13 5	116 14 4	114 6 6	3
4	11 19 5	12 5 11	122 19 4	119 13 9	4
5	12 10 9	12 19 2	129 11 11	125 7 4	5
6	13 2 9	13 13 3	136 12 5	131 7 9	6
7	13 15 6	14 18 2	144 1 4	137 15 5	7
8	14 9 1	15 3 11	151 19 3	144 10 9	8
9	15 3 5	16 0 8	160 6 7	151 14 3	9
10	15 18 8	16 18 5	169 4 0	159 6 4	10

N.B. The observations at the foot of Table I. apply in a similar manner to the results of this Table.

TABLE VI.

Showing the Amount to which a Deposit of £10 (or £100) will accumulate at the end of any number of Years up to 10, on the principle of Table I.

Rates of Interest 7 and 3 per Cent.

	Deposit of £10.						Deposit of £100.						
No. of Years.	One Half withdrawable.			One Fourth withdrawable.			One Fourth withdrawable.			One Half withdrawable.			No. of Years.
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	
1	10	10	0	10	12	0	106	0	0	105	0	0	1
2	11	0	8	11	4	10	112	8	5	110	7	0	2
3	11	12	2	11	18	7	119	5	9	116	1	6	3
4	12	4	5	12	13	3	126	12	10	122	4	0	4
5	12	17	6	13	9	0	134	10	1	128	15	1	5
6	13	11	6	14	5	10	142	18	5	135	15	4	6
7	14	6	7	15	3	10	151	18	6	143	5	5	7
8	15	2	7	16	3	1	161	11	2	151	5	11	8
9	15	19	9	17	3	9	171	17	4	159	17	10	9
10	16	18	2	18	5	9	182	18	0	169	1	8	10

N.B. The observations at the foot of Table I. apply in a similar manner to the results of this Table.

It may further be observed that the system, as developed in one or other of the last three Tables, might be adopted with advantage by Industrial Associations as an inducement to Investers. It gives them, upon the whole sum invested, an advantageous average rate of interest, and enables them to set free, at a brief notice, a considerable portion of the sum deposited, to meet unexpected emergencies.

ANNUITY DEPOSITS.

TABLE VII.

Showing the Amount to which a Deposit of £10 (or £100) *per Annum* will accumulate at the end of any number of Years up to 10; upon the condition that One Half (or One Fourth) of the aggregate of the Sums deposited may be withdrawn in the manner explained in Table I.

Rates of Interest £3. 10*s*. and £2. 10*s*. per Cent., as explained at foot.

Deposit of £10 *per Annum.*			Deposit of £100 *per Annum.*		
No. of Years.	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	
1	10 6 0	10 6 6	103 5 0	103 0 0	1
2	20 18 2	20 19 9	209 17 4	209 2 1	2
3	31 16 10	31 19 11	319 19 3	318 8 6	3
4	43 2 1	43 7 4	433 13 2	431 1 5	4
5	54 14 3	55 2 2	551 1 9	547 3 2	5
6	66 13 7	67 4 9	672 7 6	666 16 2	6
7	79 0 3	79 15 4	797 13 2	790 2 11	7
8	91 14 7	92 14 2	927 1 6	917 6 0	8
9	104 16 10	106 1 7	1060 15 6	1048 8 1	9
10	118 7 2	119 17 10	1198 18 1	1183 12 0	10

N.B. This Table shows the result of a series of *Annual Deposits* of £10 (or £100), and is found by taking successively the sums of 1, 2, 3, &c., terms of the corresponding columns of Table I., the rates of interest in this being the same as in that Table, viz. 3½ per cent. on the unwithdrawable portion and the accumulating interest, and 2½ per cent. on the withdrawable portion.

Example.—A person having deposited £10 per annum, say for 5 years, will be entitled at the end of that year to withdraw one-half or one-fourth of the aggregate of his deposits to that time, (viz. £25 or £12. 10*s.*) as the case may be, at a week's notice; the remainder, together with the interest, being left to accumulate at 3½ per cent. till the end of the term, or until withdrawn under a six months' notice. [Vide Note to Table I.]

TABLE VIII.

Showing the Amount to which a Deposit of £10 (or £100) *per Annum* will accumulate at the end of any number of Years up to 10, upon the principle of Table VII.

Rates of Interest £3. 5*s*. and £2. 10*s*. per Cent.

Deposit of £10 *per Annum*.			Deposit of £100 *per Annum*.		
No. of Years.	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. *s*. *d*.	£. *s*. *d*.	£. *s*. *d*.	£. *s*. *d*.	
1	10 5 9	10 6 2	103 1 3	102 17 6	1
2	20 17 5	20 18 7	209 5 9	208 14 4	2
3	31 15 3	31 17 7	318 15 6	317 12 6	3
4	42 19 5	43 3 4	431 12 9	429 14 0	4
5	54 10 1	54 16 0	547 19 6	545 0 9	5
6	66 7 6	66 15 10	667 18 2	663 15 0	6
7	78 11 11	79 3 1	791 11 0	785 18 11	7
8	91 3 6	91 18 0	919 0 6	911 14 9	8
9	104 2 6	105 0 11	1050 9 1	1041 4 9	9
10	117 9 2	118 11 11	1185 19 4	1174 11 6	10

N.B. This Table is formed from Table II. in the same manner as Table VII. was formed from Table I. [Vide Note to Table VII.]

TABLE IX.

Showing the Amount to which a Deposit of £10 (or £100) *per Annum* will accumulate at the end of any number of Years up to 10, upon the principle of Table VII.

Rates of Interest £3. 2*s*. 6*d*. and £2. 10*s*. per Cent.

Deposit of £10 *per Annum*.			Deposit of £100 *per Annum*.		
No. of Years.	One Half withdrawable.	One Fourth withdrawable.	One Fourth withdrawable.	One Half withdrawable.	No. of Years.
	£. *s*. *d*.	£. *s*. *d*.	£. *s*. *d*.	£ *s*. *d*.	
1	10 5 7	10 5 11	102 19 4	102 16 3	1
2	20 17 0	20 18 0	209 0 0	208 10 6	2
3	31 14 5	31 16 4	318 3 9	317 4 7	3
4	42 18 0	43 1 3	430 12 7	429 0 4	4
5	54 7 11	54 12 10	546 8 7	543 19 8	5
6	66 4 5	66 11 4	665 13 10	662 4 8	6
7	78 7 8	78 17 0	788 10 6	783 17 3	7
8	90 18 0	91 10 1	915 0 10	908 19 8	8
9	103 15 5	104 10 8	1045 7 1	1037 14 0	9
10	117 0 3	117 19 2	1179 11 8	1170 2 7	10

N.B. T[illegible] med from Table III. in the same manner as *Table* V[illegible] m Table I. [Vide Note to Table VII.]

TABLE X.

Showing the Amount to which a Deposit of £10 (or £100) *per Annum* will accumulate at the end of any number of Years up to 10, upon the principle of Table VII.

Rates of Interest 5 and 3 per Cent.

	Deposit of £10 *per Annum.*						Deposit of £100 *per Annum.*						
No. of Years.	One Half withdrawable			One Fourth withdrawable.			One Fourth withdrawable.			One Half withdrawable.			No. of Years.
	£.	s.	d	£.	s.	d.	£.	s.	d.	£.	s.	d.	
1	10	8	0	10	9	0	104	10	0	104	0	0	1
2	21	4	5	21	7	5	213	14	6	212	4	0	2
3	32	9	7	32	15	10	327	18	3	324	16	2	3
4	44	4	1	44	14	7	447	6	2	442	1	0	4
5	56	8	4	57	4	4	572	3	6	564	3	1	5
6	69	2	9	70	5	7	702	15	8	691	7	3	6
7	82	7	10	83	18	10	839	8	5	823	18	7	7
8	96	4	3	98	4	9	982	7	10	962	2	6	8
9	110	12	5	113	4	0	1132	0	3	1106	4	7	9
10	125	13	1	128	17	2	1288	12	3	1256	10	10	10

N.B. This Table is formed from Table IV. in the same manner as Table VII. was formed from Table I. [Vide Note to Table VII.]

TABLE XI.

Showing the Amount to which a Deposit of £10 (or £100) *per Annum* will accumulate at the end of any number of Years up to 10, on the principle of Table VII.

Rates of Interest 6 and 3 per Cent.

	Deposit of £10 *per Annum.*						Deposit of £100 *per Annum.*						
No of Years.	One Half withdrawable.			One Fourth withdrawable.			One Fourth withdrawable.			One Half withdrawable.			No. of Years.
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	
1	10	9	0	10	10	6	105	5	0	104	10	0	1
2	21	7	6	21	12	2	216	1	3	213	15	5	2
3	32	16	2	33	5	7	332	15	7	328	1	11	3
4	44	15	7	45	11	6	455	14	11	447	15	8	4
5	57	6	4	58	10	8	585	6	10	573	3	0	5
6	70	9	1	72	3	11	721	19	3	704	10	9	6
7	84	4	7	86	12	1	866	0	7	842	6	2	7
8	98	13	8	101	16	0	1017	19	10	986	16	11	8
9	113	17	1	117	16	8	1178	6	5	1138	11	2	9
10	129	15	9	134	15	0	1347	10	5	1297	17	6	10

N.B. This Table is formed from Table V. in the same manner as Table VII. was formed from Table I. [Vide Note to Table VII.]

TABLE XII.

Showing the Amount to which a Deposit of £10 (or £100) *per Annum* will accumulate at the end of any number of Years up to 10, on the principle of Table VII.

Rates of Interest 7 and 3 per Cent.

Deposit of £10 *per Annum.*							Deposit of £100 *per Annum.*						
No. of Years.	One Half withdrawable.			One Fourth withdrawable.			One Fourth withdrawable.			One Half withdrawable.			No. of Years.
	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	
1	10	10	0	10	12	0	106	0	0	105	0	0	1
2	21	10	8	21	16	10	218	8	5	215	7	0	2
3	33	2	10	33	15	5	337	14	2	331	8	6	3
4	45	7	3	46	8	8	464	7	0	453	12	6	4
5	58	4	9	59	17	8	598	17	1	582	7	7	5
6	71	16	3	74	3	6	741	15	6	718	2	11	6
7	86	2	10	89	7	5	893	14	0	861	8	4	7
8	101	5	5	105	10	6	1055	5	2	1012	14	3	8
9	117	5	2	122	14	3	1227	2	6	1172	12	1	9
10	134	3	4	141	0	0	1410	0	6	1341	13	9	10

N.B. This Table is formed from Table VI. in the same manner as Table VII. was formed from Table I. [Vide Note to Table VII.]

The attention of Industrial Associations is requested to the last three Tables. [Vide Note to Table VI.]

DEFERRED ANNUITIES.

TABLE XIII.

Showing the accumulated Amount, or the Life Annuity (payable half-yearly), which a single Deposit of £10 will entitle a Depositor to receive at the end of stipulated periods; the whole of the Deposit, together with the accumulated Interest, upon the principle of Table I., to be returnable at six months' notice, in case of decease of Depositor, or of his desiring to cancel the transaction before the close of the period. It being further provided that a Depositor may at any time, before entering on the Annuity, withdraw One Fourth of the Sum itself deposited, on giving one week's notice.

Rates of Interest £3. 10*s*. and £2. 10*s*. per Cent., as explained at foot.

Annuity to commence at 60.

Present Age.	Accumulated Amount.	Corresponding Annuity. Male.	Corresponding Annuity. Female.
	£. *s*. *d*.	£. *s*. *d*.	£ *s*. *d*.
20	37 9 7	3 12 8	3 9 3
25	31 13 4	3 1 5	2 18 7
30	26 15 6	2 11 11	2 9 6
35	22 13 2	2 3 11	2 1 11
40	19 3 10	1 17 2	1 15 6
45	16 5 5	1 11 7	1 10 1
50	13 16 3	1 6 9	1 5 6
55	11 14 10	1 2 9	1 1 8

Annuity to commence at 65.

Present Age.	Accumulated Amount.	Corresponding Annuity. Male.	Corresponding Annuity. Female.
	£. *s*. *d*.	£. *s* *d*.	£ *s*. *d*.
20	44 7 7	5 3 11	4 18 10
25	37 9 7	4 7 9	4 3 5
30	31 13 4	3 14 2	3 10 6
35	26 15 6	3 2 8	2 19 7
40	22 13 2	2 13 1	2 10 5
45	19 3 10	2 4 11	2 2 9
50	16 5 5	1 18 1	1 16 3
55	13 16 3	1 12 4	1 10 9
60	11 14 10	1 7 6	1 6 1

N.B. The columns in this Table headed 'Accumulated Amount' are computed on the principle of Table I., and at the same rates of [illegible] per cent. on the unwithdrawable portion of the Deposit [illegible] 2½ per cent on the withdrawable portion. The column [illegible] are deduced from the English Life Table at 3 per [illegible] on page 28, which see. An example is subjoined [illegible]

Example.—A person aged 30 having deposit[illegible] the age of 60, to receive either a gross sum of [illegible] for the remainder [illegible] say for example at [illegible] months thereafter, [illegible]

TABLE XIV.

Showing the Accumulated Amount, or the corresponding Annuity (payable half-yearly), which a single Deposit of £10 will entitle a Depositor to receive at the end of stipulated periods, on the principle of Table XIII.

Rates of Interest £3. 5s. and £2. 10s. per Cent.

Annuity to commence at 60.

Present Age.	Accumulated Amount.	Corresponding Annuity. Male.	Corresponding Annuity. Female.
	£. s. d.	£. s. d.	£. s. d.
20	34 8 11	3 6 10	3 3 8
25	29 8 10	2 17 1	2 14 5
30	25 3 6	2 8 10	2 6 6
35	21 10 10	2 1 9	1 19 10
40	18 8 10	1 15 9	1 14 1
45	15 16 0	1 10 8	1 9 2
50	13 11 0	1 6 3	1 5 0
55	11 12 8	1 2 7	1 1 6

Annuity to commence at 65.

Present Age.	Accumulated Amount.	Corresponding Annuity. Male.	Corresponding Annuity. Female.
	£. s. d.	£. s. d.	£. s. d.
20	40 6 4	4 14 5	4 9 9
25	34 8 11	4 0 8	3 16 8
30	29 8 10	3 8 11	3 5 6
35	25 3 6	2 18 11	2 16 0
40	21 10 10	2 10 5	2 7 11
45	18 8 10	2 3 2	2 1 0
50	15 16 0	1 17 0	1 15 2
55	13 11 0	1 11 9	1 10 2
60	11 12 8	1 7 3	1 5 11

N.B. The observations at the foot of Table XIII. apply in a similar manner to the results of this Table. [Vide also page 28.]

TABLE XV.

Showing the Accumulated Amount, or the corresponding Annuity, (payable half-yearly) which a single Deposit of £10 will entitle a Depositor to receive at the end of stipulated periods, on the principle of Table XIII.

Rates of Interest £3. 2*s*. 6*d*. and £2. 10*s*. per Cent.

Annuity to commence at 60.

Present Age	Accumulated Amount.			Corresponding Annuity. Male.			Corresponding Annuity. Female.		
	£.	*s*.	*d*.	£.	*s*.	*d*.	£.	*s*.	*d*.
20	33	0	7	3	4	1	3	1	1
25	28	7	10	2	15	1	2	12	6
30	24	8	3	2	7	4	2	5	1
35	21	0	0	2	0	9	1	18	10
40	18	1	7	1	15	0	1	13	5
45	15	11	5	1	10	2	1	8	9
50	13	8	6	1	6	0	1	4	10
55	11	11	7	1	2	5	1	1	5

Annuity to commence at 65.

Present Age.	Accumulated Amount.			Corresponding Annuity. Male.			Corresponding Annuity. Female.		
	£.	*s*.	*d*.	£.	*s*.	*d*.	£.	*s*.	*d*.
20	38	8	10	4	10	0	4	5	7
25	33	0	7	3	17	4	3	13	6
30	28	7	10	3	6	6	3	3	2
35	24	8	3	2	17	2	2	14	4
40	21	0	0	2	9	2	2	6	9
45	18	1	7	2	2	4	2	0	3
50	15	11	5	1	16	5	1	14	8
55	13	8	6	1	11	5	1	9	11
60	11	11	7	1	7	1	1	5	9

N.B. The observations at the foot of Table XIII. apply in a similar manner to the results of this Table. [Vide also page 28.]

END OF TABLES.

NOTICE.

Managers of Friendly Societies, Benefit Building Societies, Savings' Banks, and other Associations connected with the industrious classes, who may be desirous of receiving information as to improvements which may be desirable in their respective Institutions, or of founding new ones on sound and equitable principles, are invited to apply at " The Friendly Societies' Institute," to

W. BRIDGES, Esq.,
23, Pall-Mall, London.

Henry Lucas, Printer, 3, Burleigh Street, Strand.

WESTERN LIFE ASSURANCE SOCIETY,

3, *Parliament Street, London,*

1851.

SIR,

The many important purposes and principles of Life Assurance are now so well understood, that I presume it is unnecessary to enter into any details of its merits, but simply to beg the favour of your perusal of the Prospectus of THE WESTERN LIFE ASSURANCE SOCIETY, and to direct your attention to the many excellent plans, which it offers for granting ASSURANCES, ENDOWMENTS, and ANNUITIES, and the very favourable terms, as to the mode of payment of Premiums, upon which they can be effected. Being guaranteed by a most respectable Proprietary, no Office can hold out greater advantages.

I shall be happy to give you any further information you may desire, and should you wish to effect an Assurance on your own life, or that of another, or to make a proposal under any of the Tables, you will be furnished with the necessary Forms *(gratis)* on application either to the Office or any of our Agents.

I beg to call your attention to the Bonus recently declared and awarded to Policies effected on the participating scale; and I have much pleasure in adding, that we have most satisfactory evidence that the success of the past years of this Society is still continuing, and that it seems likely to increase.

I remain, SIR,

Your obedient Servant,

ARTHUR SCRATCHLEY, M.A.,

Actuary and Secretary.

BONUS

DECLARED AT THE FIRST DIVISION OF PROFITS,

31*st December*, 1849.

A VALUATION of the Society's Assets and Liabilities was made at the close of its first financial period, on the 31st December, 1849; and, after setting aside an ample reserve fund, a Bonus was allotted to the Assured out of their share in three-fourths of the net profits. The result is highly satisfactory; and, when the moderate rates of premium charged by this Society are compared with the very high payments *usually* required for the same amount of Policy, the Bonus here allotted will be found to be very advantageous.

The following Specimens will serve as illustrations of this point :—

	Original Amount Assured.	Annual Premiums.			Bonus.			Amount now Assured.		
	£.	£.	s.	d.	£.	s.	d.	£.	s.	d.
A. B. 1842, age 23	2,000	39	15	0	137	3	8	2137	3	8
C. D. 1842, age 34	1,000	26	15	0	75	15	6	1075	15	6
E. F. 1843, age 26	3,000	64	14	6	185	2	0	3185	2	0
&c.	&c.	&c.			&c.			&c.		

A second Division of Profits will take place at the close of the year 1854, and the attention of the Public is invited to the Tables and peculiar advantages offered to Assurers by this Society.

[See Pages 4, 5, 6, 7, Prospectus.]

SPECIMEN

OF

RATES OF PREMIUM FOR ASSURING £100,

(WITH A SHARE IN THREE-FOURTHS OF THE PROFITS).

Age.		£.	s.	d.	Age.		£.	s.	d.
17	...	1	14	4	32	...	2	10	8
22	...	1	18	8	37	...	2	18	6
27	...	2	4	5	42	...	3	8	2
					&c.			&c.	

VALUABLE PRIVILEGE.

Policies effected in this Office do not become void, through temporary difficulty in *paying a Premium,* as permission is given, on application, to suspend the payment of *interest, according to* the conditions detailed in the Prospectus.

PRINTED BY GEORGE TAYLOR,
LITTLE JAMES STREET, GRAY'S INN LANE.

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RULES

OF THE

BENEFIT

BUILDING AND INVESTMENT

SOCIETY.

Established pursuant to the Act of Parliament, 6th & 7th William IV. cap. 32.

£100 Shares.

Monthly Payments (for 10 Years only), 18s. per Share.

Entrance Fee, 2s. 6d. per £100 Share.

Half-Shares of £50, or Quarter-Shares of £25, each, may also be taken.

No Bidding for Shares, no Redemption Fee, & no Fines on Withdrawal.

The Law Expenses advanced to Members purchasing Property.

The First Subscription Meeting will be held on at Seven o'Clock in the Evening, at the ; and subsequently on the First and Third Monday in each Month, at the same Hour.

LONDON:

PRINTED BY G. PHIPPS, RANELAGH STREET, PIMLICO.

1848.

Trustees.

Directors.

Bankers.

Solicitors.

Surveyors.

Consulting Actuary.

Manager.

RULES.

I. NAME AND OBJECT OF THE SOCIETY.

THAT this Society shall be called the
BENEFIT BUILDING AND INVESTMENT SOCIETY. Its object is to raise a fund to enable its Members to receive an advance in full, of a share or shares, for the purpose of erecting or purchasing a Dwelling House or Houses, or other Freehold or Leasehold Estate in any part of England.

II. TIME AND PLACE OF MEETING.

That the first meeting for the Receipt of Subscriptions and the transaction of the ordinary business of the Society be held on the 18 at 7 o'clock in the evening, at the
and that the succeeding Meetings for receipt of share-subscriptions, and advance re-payments shall be held on the first and third Monday in each month.

That the ordinary Meetings of the Society shall be holden at the Offices aforesaid, on the first and third Monday in each month, at 7 o'clock in the evening. That the Directors shall have power from time to time to remove the said Offices, and alter the time of meeting as they may see fit. That notice of any such removal or alteration shall be given to every Member of the Society. That the Directors shall have power to hold Special Meetings of their body, and to adjourn their ordinary and Special Meetings, as well as all General and Special Meetings of the Members of the Society as occasion may require.

That the business of the Directors' Meetings shall commence at 7 o'clock in the evening, unless upon Subscription Nights when the same shall be deferred to 8 o'clock.

That an Annual General Meeting of the Members shall be holden on the first Wednesday in the month of August in each year, at which the Directors shall exhibit a General Statement of the funds, effects, liabilities, and accounts of the Society, specifying in whose custody or possession the funds and effects shall then be, together with an account of all and every the sums of money received and expended on behalf of the Society during the past year, such Statement to be previously audited in manner hereafter mentioned, and countersigned by the Manager, and a copy of such Statement shall be supplied to every Member on application to the Manager.

That a Special Meeting of the Members may be held on a requisition to the Manager, to convene such Meeting; such requisition to be signed by at least five Directors, or by ten ordinary Members, which requisition shall state the object for which such Special General Meeting is required; seven days' notice at least of which Meeting shall be given to every Member, of the hour, place, and object of such Special General Meeting. That at such Special General Meeting no business shall be transacted not mentioned in the requisition for calling such Meeting.

III. SHARE SUBSCRIPTIONS.

That the Shares shall be of the ultimate value of £100 each. Each Member on admission shall pay an Entrance Fee of 2s. 6d. per share, and a Monthly Subscription of 13s. per share, for and during the full term of Ten years, to commence on and from the first or fifteenth day of the month in which he or she shall be admitted.

Half-shares may also be issued by payment of an Entrace Fee of 1s. 6d., and a Monthly Subscription of 6s. 6d; and Quarter shares also at an Entrance Fee of 1s., and a Monthly Subscription of 3s. 3d. for the like period.

An allowance of Sixpence in the pound will be made on all Subscriptions paid in advance, for a period of not less than Twelve months.

IV. ADVANCES AND REPAYMENTS.

The Society will make advances to its Members of any sum not exceeding £800, for terms of 5, 7, 10, 12, or

14 years, repayable by Monthly or Quarterly contributions, covering Principal and Interest, at the rates hereafter specified, *viz.*,

Repayments for a Loan of £100, and interest.—

			Monthly.			Quarterly.		
For a Term of	5	years . .	2	0	8	6	5	0
,,	7	,, . . .	1	11	0	4	15	4
,,	10	,, . . .	1	3	9	3	13	1
,,	12	,, . . .	1	1	0	3	4	6
,,	14	,, . . .	0	19	1	2	18	9

When a Loan is required for Twelve years, not more than three-fourths of the value of the mortgaged property shall be advanced thereon: nor more than two-thirds of its value, when the Loan be taken for fourteen years.

No Member will be allowed to receive an advance of shares exceeding the number he has previously subscribed for, unless he pay down the entrance fees, and continue to pay half the subscriptions on the whole number of shares required from the date of his being placed on the ballot list.

The following commissions shall be deducted from all advances made to Members, and shall be appropriated to the Management and Contingent Fund:—namely:—

On Loans advanced for	5	years . .	£2	10	0	per cent.
,, ,,	7	,, . .	3	0	0	,,
,, ,,	10	,, . .	3	10	0	,,
,, ,,	12	,, . .	4	0	0	,,
,, ,,	14	,, . .	5	0	0	,,

And that in consideration of the aforesaid Commissions so allowed, Borrowing Members shall not be called upon to contribute any other sums towards expenses or contingencies excepting such fines, transfer, or other fees, as may be hereafter mentioned in these rules.

Members not being in arrear for Subscriptions and Fines and having made at least three months' payments on their shares, shall be eligible to ballot for an advance of money, provided they apply, in writing, to the Manager, on or before the 25th day of the month, stating the amount desired, and such Member shall receive a notice of the next Meeting for advance of money, at which Meeting the names of those Members having so applied for ad-

vances shall be written by the Manager on separate pieces of paper, and placed in a box, which after being previously shaken together, the Member whose name is first drawn from the box, by the Chairman of the Meeting, shall be entitled to receive such amount, as he or she shall have so given notice for, (subject, however, to the discretion of the Directors as to the sums to be then advanced), and should any surplus sum be then at the disposal of the Directors, the Member whose name shall be secondly drawn shall be entitled to receive such surplus or any required portion thereof; and so on, provided that, should the Member whose name is last drawn, not be furnished with his required amount, the balance shall be reserved for him out of the first money applicable for such purpose, and of which he shall have due notice. All Members having given notice for advances shall continue in the ballot until provided with money; and whether present or not, shall be bound by the proceedings of the Meeting. The ballot for advances shall, in all cases, take place on the first Monday of the month, at a quarter past nine o'clock precisely, to the exclusion of all other business.

Any Member entitled to an advance shall within Six weeks from the date of the ballot Meeting, find a good and sufficient security by way of Mortgage for the same, and in case of failure he shall be allowed a further period of Six weeks to complete the same, provided he pay Interest on the advance at the rate of 5 per cent. per annum, to commence with the second Six weeks so allowed him, at the end of which time his right to such advance shall be forfeited to the next Member then on the list, unless he consent to make his repayments in respect of his awarded advance from that date.

Members entitled to advances shall furnish duplicate particulars of Property proposed as security, in the form to be furnished by the Manager at the offices of the Society, and the security being accepted by the Directors, who shall have been previously satisfied by the Surveyor and Solicitor, of the sufficiency of the security offered, and all other preliminaries being arranged, the money agreed to be advanced shall be paid over to the Member. And in case the money is applied to the purchase of land, and afterwards to erect buildings thereon, the same shall be advanced by such instalments as the Surveyor shall advise the Directors.

The expenses of enquiry into title, and of survey of

property, shall be borne by the Member proposing the security, who shall deposit with the Society a reasonable sum on account thereof, at the time the security is offered.

That the repayment for advances shall be made at the end of the first calendar month, or of the first quarter, (as may be agreed upon by the Directors) next following the receipt of the advance or any portion thereof, and shall continue to be so made for the full period for which the advance may have been originally taken, unless the Mortgage be previously redeemed; and that in all cases such repayments shall be due on the first or fifteenth day of each month, and be respectively made thereon, if they be days of Meeting, or on the first subscription Meeting thence ensuing.

That the Directors shall, from time to time, have the power to regulate the amounts of advances, and the term and mode of periodical repayments according to the nature and condition of the property proposed to be mortgaged, it being the object of the Society to accommodate the greatest possible number of Members with advances.

Members desiring advances before they are entitled to them through the ballot, may be accommodated, provided they have been in the ballot list for at least six months, and provided the Society can obtain loans from their bankers or others, to meet such purposes, and upon the Members agreeing to pay additional Interest, for a stated period, or, until such advance shall be awarded to them by the ballot: and in such cases, preference will be given to Members who shall procure a Loan for the Society to meet their advances.

The Society will receive deposits of any sum not less than £5, allowing interest at 5 per cent., payable yearly.

V. FINES FOR NON-PAYMENT OF SHARE AND ADVANCE SUBSCRIPTIONS.

Subscriptions for shares and advances shall be payable at the offices of the Society on the first and third Monday in each month, between the hours of seven and nine o'clock in the evening, receipts for which shall be given on a card or book to be provided by the Society, by one of the Directors of the Society then present, countersigned by the Manager, and no acknowledgement otherwise given or taken shall be valid, unless the Manager be unavoidably absent, when a minute of the Directors shall be duly en-

tered in their journal, authorising some Member of the Board to perform the duties of the Manager on that occasion.

The fines for non-payment of share-subscriptions shall be at the rate of 6d. per share per month for each default and so in proportion for half shares.

The fines for non-payment of monthly advance-repayments shall be at the rate of 1s. in the pound per month on the amount thereof, and upon quarterly repayments at the rate of 1s. 6d. in the pound for each month's default.

When the fines on advanced shares equal the amount paid in, the same shall be forfeited to the Society.

VI. SECURITY FOR ADVANCES.

The Mortgage deed shall contain full powers of sale, as a security for so much money as shall be therein expressed to be advanced and secured. In case the mortgagor shall fail, neglect, or refuse, for the space of four calendar months, to observe and perform all or any of his or her covenants for payment of advance-instalments, according to the terms and conditions of these rules and the said mortgage, as well as any Fines inflicted for neglect of payment, on his or her part to be observed and performed, the Manager shall send a Notice in writing to such Member so in default, calling upon him or her within two calendar months from the date of the last default of advance-repayments, to pay up the amount thereof, with all Fines and other payments due in respect thereof; and that in case the Member fail to comply with this requirement, that then the Trustees named in the said Mortgage, or the Survivor or Survivors of them, or the Executors or Administrators of the last Survivor, or the Trustees for the time being of the Society, shall, on being so instructed in writing by the Board of Directors for the time being, either with or without the privity or consent of the said Mortgagor, his or her heirs, executors, administrators, or assigns, appoint a person, to be approved of by the said Board, to collect the rents of the premises thereby mortgaged; and having first made a demand upon the mortgaged premises for the amount of arrears then due and unpaid, shall at any time or times thereafter, absolutely sell all or any part of the said premises, either by public auction or private contract, and either together or in lots, and at one time or separate times, if desirable, for the

most money that can be reasonably had or gotten for the same; and that every receipt of the Trustee or Trustees for the time being shall be a good and sufficient discharge to the Purchaser or Purchasers, paying his or their purchase money, who shall not be obliged to see to the application of the same, nor be required to see whether any or what monies shall be due under such mortgage, or whether there has or has not been any breach on the part of any such Mortgagor of the rules of the Society, or of the stipulations of such Mortgage deed, nor whether he or she has failed to pay any of the advance-repayments, fines, or other payments, either for the said space of four calendar months or for any other period; nor whether such trustees or trustee, or the executors or administrators of the last survivor of them, or the trustee or trustees of the Society for the time being, have or have not authority for disposing of the premises comprised therein, but the possession of the title deeds and mortgage deed, and the written instructions of the Board of Directors shall be considered sufficient authority for disposing of the said premises by the Trustees; provided always, that the money to be produced from such rents and profits, or such sale or sales, as aforesaid, shall in the first place be applied in payment of all costs and expenses which may be incurred on account thereof, and in the next place, to reimburse the Society in the amount of advance-repayments then due and unpaid, together with all fines in respect thereof, and of the then value of the future repayments in respect of such mortgaged property, with interest on the aforesaid amount of arrears, and fines, and the then value of such future advance repayments, at the rate of 7 per cent. per annum from the date of the first default: and that the present value of such future repayments shall be calculated from the date of such first default to the end of the term for which the mortgage was originally taken, discount being allowed at the rate of 6 per cent. on such future repayments to the end of the mortgage term, and upon the principle of repayments made at the end of each year; and in case the rents and profits of the mortgaged property, and produce of the sale thereof, after deducting expenses be not sufficient to discharge the amount of such repayments in arrear, and the present value of the future repayments so calculated, and interest thereon, the Mortgagor so in default shall immediately pay the balance due thereon to the Society; but that the trustee or trustees shall pay the surplus (if

any) arising from the receipt of the rents and profits, and from the sale of such premises aforesaid, to the said Mortgagor, his, her, or their heirs, executors, administrators, or assigns, or as he, she, or they may or shall direct: provided always, that in case any of the Mortgagors named in any mortgage deed, or his, her, or their heirs, executors, administrators, or assigns, having obtained an interest in such property, (so long as the said premises may continue in mortgage to the Society,) shall become insolvent, or be imprisoned for debt, or be made bankrupt, then such trustees or trustee, or the executors or administrators of the last survivor of them, or the trustees for the time being of the Society, with the sanction of the Board of Directors for the time being, shall have full power and authority to take possession of the premises mortgaged, and let and manage the same, and collect the rents thereof, whether such Mortgagor, or his heirs, executors, administrators, or assigns, be in arrear with his, her, or their payments, or not; and in case any of the premises mortgaged to the Society be left incomplete, the trustees or trustee for the time being, under the direction of the Board, shall have power to complete the same, and the money expended and laid out in so doing shall be considered as a part of, and in addition to the original mortgage; and the said trustees shall also, with the sanction of the Board, have the option of selling and disposing of the premises mortgaged, either in their incomplete state, or upon the same being so completed as aforesaid. That upon payment of all monies due upon such mortgage, pursuant to these rules, the trustees or trustee for the time being, shall, at the cost of the Member or person requiring the same, endorse a receipt or acknowledgement for the same on the said mortgage, in the form annexed to these rules, according to the act 6 and 7 Wm. IV., cap. 32, sec. 5.

That during the continuance of a mortgage the Member shall become actual tenant to the Society in respect of his mortgaged premises, which shall be chargeable with the repayments in discharge thereof as ordinary rent, and for any arrears of which repayments the Society shall have power to distrain in the usual way.

That Members holding advances upon quarterly repayments shall be considered to be in arrear of four months, when any quarterly repayment shall have remained unsatisfied for the period of one calendar month, after the same shall have become due.

VII. FIRE INSURANCE AND GROUND RENT

That all property mortgaged to this Society shall be insured, in pursuance of any covenant contained in the lease or deed under which such property shall be held, or as the Directors shall determine; and the Manager shall immediately effect the same in the names of the Trustees of the Society, in conformity with written instructions to be furnished to him by the Solicitor: and, in case of neglect, the Manager shall be fined twenty shillings: and he shall pay all premiums for insurance of mortgaged property as the same respectively shall become due, or be fined twenty shillings for each insurance left unpaid; and the persons on whose account such premiums for insurance shall be paid, shall, on demand, refund the amount so paid.

That the Manager shall pay all ground rents chargeable on property mortgaged to the Society immediately on the several amounts respectively falling due, or within such period as the Ground Landlord may stipulate, or he shall be fined twenty shillings for each neglect; and the member on whose account such ground rent shall be so paid, shall immediately refund the amount thereof, with and in addition to his next monthly advance repayments, and in default thereof pay a fine of one shilling in the pound on the amount thereof; and until such ground rent and fine be paid by the member, the same shall be deducted from the amount of advance repayments already paid by him, which shall be liable to fines the same as if the portion of advance repayments had not been already paid; and the same rule shall apply to the non-payments of fire insurance premiums.

Whenever any property mortgaged to this society shall receive any damage from fire or any other cause, for which the Insurance Company may be liable to give compensation, the Trustees for the time being of the Society shall receive the amount of damage so sustained from the Insurance Company, unless by the power usually granted to certain Insurance Companies, the Insurance Company, by which such property has been insured, shall cause the premises so destroyed or damaged to be rebuilt or repaired; and in such case, the surveyors of the Society shall inspect the premises so rebuilt or repaired, and furnish to the Board of Directors their report of the sufficiency or insufficiency of such re-erection or repairs by the Insurance Company;

and in case the same be not completed to the satisfaction of the Directors and the Surveyors, the Board of Directors shall be empowered to take the necessary steps to have such re-erection or repairs of the said premises perfected by the Insurance Company, to the extent of the insurance effected in the policy of insurance. But in case the Trustees for the time being shall receive the amount of such damages in money from the Insurance Company, then the Board of Directors shall cause the said premises to be rebuilt or restored, under the superintendence of the Surveyor of the Society, at a cost not exceeding the amount of such monies so received from the Insurance Company, unless the Member interested in the property shall furnish additional funds requisite to cover any further outlay he may require.

VIII. POWER TO SELL, REDEEM, AND EXCHANGE MORTGAGED PROPERTY.

That if any Member who shall have obtained an advance shall be desirous to sell the property mortgaged, it shall be lawful for the purchaser, on becoming a Member of the Society, to take the property subject to such mortgage, and thenceforth to become answerable for the payment of all advance repayments in arrear, and fines then due thereon, as well as for all future advance repayments and fines thereon from time to time falling due in respect of such mortgaged property, an account of all which advance repayments and fines then due and unpaid, shall be made up and acknowledged (in writing) by the person proposing to receive such liabilities and property in mortgage, which said account shall be duly signed by the person so becoming a Member in the presence of the Manager, Solicitor, or one of the Directors of the Society, and provided the sanction of the Directors be given to such transfer, the Trustees for the time being shall at the request and cost of the Member so transferring his interest in the mortgaged property, then release him from all future responsibilities in respect of such property so transferred.

That a transfer fee of five shillings for each advanced share shall be payable to the Society, after a mortgage has been made.

That if any Member shall be desirous of having his property discharged from the Mortgage under which it may be liable to the Society before the expiration of the full term for which it was originally taken, he shall be allowed to do so on giving a notice of two clear calendar months prior to the ordinary Meeting at which the redemption of such Mortgage is proposed to be completed; and that on payment of all advance repayments, and any fines due in respect thereof up to the time of the redemption of such Mortgage, and of the present value of the future repayments calculated to the end of the original term, and discounted after the rate of 6 per cent. interest, as laid down in rule VI, together with a redemption fee of 5s. per cent. on the balance so due, the Trustees for the time being shall at the request of the Directors, and at the cost of the Member, cause to be endorsed on the Mortgage deed, a receipt or acknowledgement for the full payment of the amount secured in such Mortgage in the form annexed to these rules, according to the act, 6 and 7 Wm. IV., cap. 32, s. 5.

That Members giving notice of a redemption of a Mortgage, shall be liable to the usual fines for nonpayment of the advance instalments, up to the time such redemption shall be completed.

Members may, on payment of the expenses of survey, and other necessary charges, and a fee of 5s. for each advanced share, exchange a Mortgage already taken to any other property of adequate value, provided no alteration be made in the original mode of repayments; and with the consent of the Directors, Members may also discharge any portion of a property from the liability of a Mortgage.

IX. MEMBERS TRANSFERRING OR WITHDRAWING SHARES.

Members not having obtained advances, and upon payment of arrears, may, on giving notice to the Manager, of at least seven days prior to the to the first or third Monday in each month, be at liberty to transfer his or her shares, and the entire interest therein, on payment of a transfer fee of 2s. per share to the Society; but in case any award of advanced shares has been made to the Mem-

ber, a transfer fee of 20s. per share shall be chargeable thereon, but in such case the transfer must be made to an existing Member of the Society.

The agreement of transfer shall be made and executed by the Member, and duly attested by the Manager, or one of the Directors.

In case of the death or insanity of a Member before receiving an advance, and upon the application of the wife, widow, or legal representatives of such deceased or insane Member, to withdraw from the Society, the wife, widow, or such representatives, shall be entitled to a preference before ordinary Members, and to withdraw at any time, and to receive back, at the time fixed by the Directors for such repayment, the amount of subscriptions or shares which such deceased or insane Member may have paid to the Society, less all fines due and unpaid by the insane or deceased Member at the time of his seizure or death, with accumulations thereon, as hereinafter provided.

Members not having received an advance, who may be desirous of withdrawing from the Society, must send a written notice to the Manager of his intention so to do, at least ten days before the first Monday in each month, and that such withdrawals will be regulated as follows:— No withdrawal to be permitted unless in case of death or insanity, under twelve months from the date of each Member's admission respectively, provided always, that payment of any debts due from the Society shall, if required, be made before any share can be withdrawn; and that under all circumstances, the sums paid for withdrawals shall in no case exceed the income derived from the repayments of shares already advanced to Members; and that withdrawn shares (not wholly subscribed for) shall be paid out according to the number of applicants on the list kept for that purpose, each Member receiving the due proportion of his subscriptions paid in, so that all such Members shall be simultaneously accommodated with a portion of their shares. And that in case the expenses of the Society, and any loss sustained by it, exceed the monies appropriated to the Management and Contingent Fund, all withdrawn shares shall be chargeable with a due proportion of such excess according to the number of years such shares shall have been in force, and that this rule shall equally apply to Members cancelling their unadvanced shares previously to taking a loan from the Society.

That next after payment of withdrawn shares to deceased or lunatic Members, the persons holding shares paid up for full ten years shall have a preference, which shall be paid out in full and in rotation, according to their respective subscriptions being fully discharged, subject, however, to the aforesaid deduction for excess of expenses or losses (if any); and that interest payable annually at the rate of 6 per cent. per annum be allowed to such Members holding paid up shares, on the amounts respectively due to them, such interest to commence from the date of the realisation of their shares respectively.

That subject to such provisions aforesaid, the sums payable on *Withdrawn Shares* (upon which all subscriptions and fines shall have been duly paid) shall be according to the following table, and provided a Member withdraw his shares in the course of a year, the sum set down at the close of the last year shall be payable, with interest thereon at 5 per cent, and also any monthly subscriptions subsequently paid; and so in proportion for Half- or Quarter-shares—*viz.*

At the end of the	*On Half or £50 Shares.*	*On Whole or £100 Shares.*
First year	3 18 0	7 16 0
Second year	7 19 10	15 19 9
Third year	12 5 10	24 11 9
Fourth year	16 16 2	33 12 4
Fifth year	21 10 11	43 1 11
Sixth year	26 10 6	53 1 1
Seventh year	31 15 0	63 10 1
Eighth year	37 4 9	74 9 7
Ninth year	43 0 0	86 0 1
Last or Tenth year	50 0 0	100 0 0
	WITH PROFITS.	WITH PROFITS.

Where any Subscriptions and Fines shall remain due and unpaid on any withdrawn shares, or parts of shares, at the end of a year for a period not more than four months, the amount of such unpaid subscriptions and fines shall be deducted from the sums set down in the above table and the balance thereof shall be payable to the Member, such fines to be calculated up to the first day of the month on which the applicant for withdrawals is placed on the list kept for that purpose. But where the subscriptions or fines shall be in arrear for more than four calendar months, no further interest shall be allowed on the previous payments, until the arrears are settled.

Members on receiving advances may continue to hold their shares or cancel the same; in which latter case, the sum then due in respect thereof will be passed to the credit of their loan account, and security will be taken only for the balance.

X. MEMBERS DYING, BECOMING LUNATIC, OR INSANE.

That no benefit of survivorship shall be claimed by the Members of this Society, but upon the death of Members during the term of their subscription, their legal representatives shall succeed according to law to their shares and interest in their property mortgaged to the Society, (if any,) and shall enjoy the same privileges, and be subject to the same payments, fines, &c., as the deceased shareholder would have had, had he been living. But in case such shares or interest in mortgaged property devolve upon more than one legatee, or more than one executor, or administrator, the right of voting of such legatees, or executors or administrators, as Members of this Society, shall be restricted to one of them respectively, either to be agreed upon by themselves, or in case of dispute to be determined by the Board of Directors.

That in the event of any Member being declared lunatic, or of unsound mind, no fines shall be payable for arrears of subscriptions, fines, &c., until a committee or guardian of such afflicted Member be legally appointed, or until some relative or friend shall undertake to discharge his said subscriptions, fines, and other payments to the Society, provided, nevertheless, that on an application being made by the Directors to some relative or interested friend of the afflicted Member, to see to the due payment of his or her subscriptions, advance instalments, and other payments, such application shall be deemed a reasonable cause why such fines should be thenceforward enforced, and that the Directors shall then be fully authorised in taking the ordinary steps for the recovery of all arrear payments whatsoever, which may be then due in respect of the shares or mortgaged property of the afflicted Member, and if requisite, to proceed to the sale of such property, in the usual way; and that upon the legal appointment of a

Committee or Guardian of the afflicted Member, the Society shall, if so required, but at a time fixed by the Directors, pay over to the Committee or Guardian of such afflicted Member, the amount of actual share subscriptions paid by such Member, less the fines due up to the time of his lunacy, or unsoundness of mind, and the usual deduction towards the expenses of management as in case of an ordinary withdrawal of shares; and in case such afflicted Member may have received an advance of shares, the Committee or Guardian may be allowed to dispose of such property, or to redeem the mortgage thereon, or exercise any other privileges thereof as may pertain to the said Member; and in case of a transfer of shares or mortgaged property, or of a redemption of such property in consequence of such lunacy or unsoundness of mind, the transfer and redemption fees chargeable in respect thereof, shall be reduced one-half from the usual rates.

XI. EXPENSES OF SURVEY, MORTGAGES, &c.

That the expenses of every survey, valuation, mortgage, and supervision by the Surveyor of the Society of any buildings erected upon property previously mortgaged to the Society, shall be borne by the Member respectively applying for or receiving an advance, and excepting the cost of Stamps, Registration, and Travelling expenses paid out of pocket at the time by the Solicitor or Surveyor, may be repaid by an additional and proportional monthly subscription extending over a period not exceeding twelve calendar months, provided the Member agrees to allow a fee of 1s. in the pound on each additional monthly subscription; and in case of a failure of their due payment, the same shall be chargeable on the mortgaged property, and be deducted from the advance instalments.

XII. MANAGEMENT & CONTINGENT FUND.

All fines, fees, and commissions whatsoever mentioned in these rules, shall be passed to a Management and Contingent Fund, and so also a deduction at the rate of five pounds per cent. per annum from the amount of income derived from the repayment of advanced shares.

That the expenses of Management and any losses that may be incurred by the Society shall be defrayed out of the Management and Contingent fund; but if such expenses or losses be greater than the sum of such Management and Contingent Fund, the excess shall be borne by the holders of unadvanced shares, not wholly paid up for ten years, in proportion to the number respectively held by each, and according to the number of years the same shall have been in force.

That at the end of the first five years, and every subsequent year, an estimate of the management and Contingent Fund shall be made, and if, after all losses and expenses shall have been satisfied, any surplus profit remain, the same shall be appropriated thus:—

One-third to a Permanent Guarantee fund to meet future contingencies;

And the other two-thirds to the holders of all unadvanced shares not then in arrear for subscriptions and fines, in proportion to their shares held, and to the number of years they have been respectively in force, such bonus to be paid to the Members on withdrawal of their shares.

That the expenses of all special meetings of the Members shall be borne by the Members subscribing the requisition, unless the Directors determine the importance of the occasion to be such as to render their payment by the Society just and reasonable.

That each Member on admission shall pay six pence for a copy of these rules.

XIII. REGISTERS OF MEMBERS, SHARES, &c.

That a Register be kept, in which shall be entered the christian and surname, profession, trade, or business, and the place of abode of every Member of the Society, and as often as any Member shall change his or her place of abode, he or she shall within 14 days give a notice thereof to the Manager, or forfeit 1s. 6d. for each neglect. That on such notice being given, the alteration shall be duly entered in such Register; and all notices shall be deemed duly given by putting the same into the post office, addressed to the Member according to the last entry on the Register.

That a Register of every member of the Society be also kept, in which shall be entered the number and numerical

order of the shares held by him, her, or them, the date of entry, transfer, or cancelling of the same, and any other details deemed necessary.

XIV. AUDIT OF ACCOUNTS.

That at the first meeting of the Society, two Auditors shall be chosen, one by the Directors, and one by the Members present, for the purpose of auditing the accounts of the Society prior to the Annual General Meeting. That the future appointments of Auditors shall be made at the General Annual Meetings, except in the case of death during the year, when the vacancy shall be filled at the next monthly meeting by the Directors and Members respectively present. That the Auditors attending shall receive 21s. each, as a remuneration for their services. That a consulting Actuary shall also be engaged to make an investigation of the accounts of the Society, at the end of each half-year, to whom all questions relating to the value of shares, redemptions of mortgages, &c., shall be referred.

XV. ARBITRATION.

That in case of dispute arising between the Society and any Member thereof, or the legal representatives of any Member, reference shall be made to Arbitration, pursuant to 10 Geo. IV., cap. 56, sec. 27, unless such dispute can be amicably arranged by the Directors and the Member, or his legal representative, within fourteen days from the time such disputed matter shall be formally brought before the board. At the first meeting after the enrolment of these rules, five Arbitrators shall be elected by the Members present, none of them directly or indirectly connected with the Society; and in case of reference to Arbitration, the names of all the Arbitrators shall be written on separate pieces of paper, and placed in a box, and the three whose names are first drawn by the complaining party, or some one appointed by him or her, shall be the Arbitrators to decide the matter in dispute, whose decision shall be final; provided always that the award of the Arbitrators shall be made within one calendar month next after a notice of the reference shall be given by the Manager to each of the

arbitrators appointed to adjust the matters in difference, unless a consent in writing be given by both parties to an extension of the time. Each of the Arbitrators so drawn and attending shall receive a remuneration of 10*s.*; and the costs of the reference shall be paid as the Arbitrators shall direct. The party requiring the Arbitration shall deposit with the Treasurer 30*s.* for the Arbitrators' remuneration.

XVI. OFFICERS.

That for the conduct of the business of the society, the following officers shall be appointed—namely, three Trustees, at least eight elected Directors, a Treasurer, Surveyor, Solicitor, two Auditors, and a Manager.

XVII. QUALIFICATION OF MEMBERS.

That the holders of a Share, Half-share, or Quarter-share, (advanced or otherwise) shall be deemed Members, and as such be entitled to vote at all General Meetings. Females and minors may be Members, but shall not be eligible to hold any offices; nor shall minors during their infancy be entitled to vote on any question, or be eligible to receive an appropriation of advanced shares.

XVIII. RECEIPT OF SUBSCRIPTIONS.

That all Subscriptions for shares, advance repayments, fines, and other monies whatsoever becoming due and payable to the Society, shall be received only at the usual Subscription Meetings, during the hours of seven and nine o'clock in the evening, or at such other times as the Board of Directors may hereafter fix for that purpose That all monies so received at such Subscription Meetings shall be delivered to the Treasurer, and on the following morning be paid by him to the Bankers of the Society for the time being and the book in which the entry of monies so paid, or the Bankers' receipt in lieu thereof, shall on that day be deposited with the Manager, who shall cause the same to be produced at the next Meeting of the Directors.

That all Subscriptions for original shares shall become

payable Monthly in advance from the first or fifteenth day of each month; and all repayments for advanced shares retrospectively due monthly or quarterly after the date of advance, such dates to be restricted as far as possible to the first day of each month.

That the Banking account shall be opened in the names of the Trustees for the time being. That all cheques must be signed by at least one Trustee, and counter-signed by the Chairman of the Board of Directors and the Manager. That all payments exceeding five pounds be made by cheques on the Bankers; and that for the payment of current petty expenses, the Manager shall from time to time receive a cheque for ten pounds, which shall be duly renewed on a proper account of his former payments to the amounts of the last cheque received by him, being made to and allowed by the Board.

XIX. MODE OF VOTING.

That all Elections and questions shall be decided by a show of hands, or by ballot, if demanded. No Member to have more than one vote; and in all cases of equality of votes, the Chairman shall have an additional or casting vote. But no Member shall be allowed to vote on any question affecting his individual interest or conduct.

XX. DISSOLUTION OF THE SOCIETY.

That no dissolution of this Society shall take place, unless its affairs be deranged, or its principles prove inadequate to promote its objects, or its funds be insufficient to meet the claims upon them, or from any other such cause rendering the dissolution absolutely necessary, and then only in pursuance of the provisions of the Act 10 Geo. IV., cap. 56, sec. 26, and any Member in any way attempting to promote a dissolution of the Society, but for the causes before named, shall forfeit all his monies, benefit, and interest therein, and be forthwith expelled the same.

XXI. NEW RULES & ALTERATION OF RULES.

No rule herein contained, or any rule hereafter to be

made, by virtue thereof, shall be altered, rescinded, or repealed, unless pursuant to 10 Geo. IV., c. 56, sec. 9, at a General Meeting convened for the purpose; nor shall such new rule affect the fundamental principles of the Society, but shall apply only to an explanation of the present rules, or to facilitating the operations of the Society.

XXII. CONSTRUCTION OF RULES.

That in the practical application of these Rules, or any Rules hereafter to be made, by virtue thereof, the construction put upon them by the Board of Directors shall be final and conclusive. That a word in the singular number shall be applicable to the plural; and the term "his" or "her" shall apply to a "female" as well as "male," unless there be something in the subject matter or context repugnant to such construction.

XXIII. MANAGER.

That   be appointed Manager of this Society.

That the Manager shall receive a Salary (payable quarterly) at the rate of 3*s*. per share per annum, on all investing shares up to 300, and 2*s*. per share afterwards.

That if the Manager shall neglect to attend any meetings of the Society at the time named for the commencement of such meeting, without showing sufficient cause to the Directors then present, he shall be fined five shillings. He shall enter minutes of all resolutions in the rough minute book; the same shall be fairly copied into another, to be read as part of the business of the next meeting; both to be signed by the Chairman. He shall keep the accounts in order, in proper books to be provided for the purpose, shall send all circulars, and conduct all the correspondence of the Society.

XXIV. TRUSTEES.

That the Trustees shall be *ex officio* members of the Board of Directors, but in no wise interested in the funds, effects,

or property of the Society, and that they shall continue in office during the pleasure of the Board of Directors. That in case the Trustees first appointed, or any or either of them, or any future Trustee or Trustees to be appointed, as hereinafter provided, shall die, or be desirous, of resigning, or be discharged from, or shall become incapable of acting in the trusts in him or them reposed by these rules, or be guilty of any gross neglect or improper conduct (of which the Directors shall be the only judges) or shall remove from to a distance of more than ten miles, or cease to have a place of business in so that the performance of their duties may become inconvenient to them, or that if a difficulty of access to them shall impede the business of the Society, or if they shall become bankrupt or insolvent, the Manager shall immediately convene a Special Meeting of the Directors, and the Directors shall hear and determine thereon, and may thereupon remove such Trustee or Trustees; and as often as any new Trustee or Trustees shall be elected or appointed, the Trustee or Trustees so removed shall cease to be a Trustee or Trustees, and shall be incapable to act after such declaration by the Board of Directors of his or their incapability to act as a Trustee or Trustees shall be notified to him or them, if such an intimation can be conveyed to them, or after the the appointment of a new Trustee or Trustees, shall have taken place; and after every fresh appointment of a Trustee or Trustees, the resolution of appointment shall be signed by the Chairman of the Directors for the time being, or of the Chairman of the meeting at which such appointment shall be made, by two Members and the Manager, and the same shall be duly entered on the minutes of such meeting; and the estates, monies securities, funds, deeds, papers, and property of the Society shall at once become vested (without any assignment) in the continuing and newly appointed Trustee or Trustees; or should the Trustee or Trustees so resigned, incapacitated, or discharged, be out of the kingdom, or no means of communication can be had with him or them, then the removal of him or them by the Board of Directors, and the appointment of a new Trustee or Trustees in his or their stead, shall be likewise sufficient to vest all such estates, monies, securities, funds, deeds, papers, and property of the Society, and all other matters pertaining thereto in the continuing and newly appointed Trustee or Trustees. In case of a

vacancy of office from any cause whatever by any Trustee or Trustees first appointed, or to be hereafter appointed by virtue of these rules, the appointment of a new Trustee or Trustees shall be made at the next monthly meeting by the Members then present, providing a notice of such intended appointment can be sent to every Member seven clear days before such meeting, or at the Annual General Meeting if such vacancy take place within fourteen days previous to the same. That all deeds, writings, and securities to, and from the Society, shall be made and taken in the names of the Trustees or Trustee for the time being, and shall be deposited with the Bankers of the Society, to be appointed by the Directors, or with other persons as they may deem fit, in a box, having three different locks, and keys, one or which shall be kept by a Trustee to be named by the Directors, one by the Chairman of the Directors, and one by the Treasurer. The Manager shall furnish to the Trustees an inventory of the contents of such box, and retain a duplicate thereof for the use of the Directors. In case it shall be necessary or expedient to bring or defend any action, suit, or prosecution, at law, or in equity, touching or concerning the property or assets, rights or claim of this Society, or touching, or concerning the breach or non-performance of any of the articles, matters and things herein contained, or of the conduct of any Member or officer of this Society, the same shall be brought or defended by, or in the names or name of the Trustees or Trustee for the time being, and he, or they, shall be idemnified from all loss or damage to be by him or them sustained in consequence thereof, but no such proceedings shall be taken or defended until the approbation of a majority of the Directors present at a special meeting, to be convened for that purpose shall be first had and obtained. The Trustees for the time being, may at the request of the Directors borrow and take up at interest any sum of money from any Banker, or other person, as occasion may require, to procure which the Trustees may give their own personal security, and they shall be indemnified in respect thereof, out of the future receipts of the Society. That the Trustees or Trustee for the time being, shall do no act in their official capacity, but by the written order of the Board of Directors, such order to be signed by the Chairman of the meeting at which such order is made, and to be attested by the Manager.

That

be hereby appointed Trustees of this Society.

XXV. DIRECTORS & TREASURER.

The elected Directors shall be Members, all of whom shall go out of office every year, but be eligible for re-election. The future election of Directors shall take place at the Annual General Meetings, except in case of death, during the year, when any vacancy shall be filled up by the Board. That if any Director shall become Bankrupt, be declared Insolvent, or resign, his office shall become vacant, and if, during the year, the vacancy shall be filled up by the Board as in case of death. The Directors shall annually appoint out of their body, a Chairman, Deputy-chairman, and Treasurer; and, in the absence of either Chairman or Deputy-chairman, the Directors shall appoint a Chairman for the several Meetings. That one of the Directors (in rotation) with the Treasurer and Manager shall attend the Meetings for the receipt of money, within the hours specified in these rules, or at such other times as the Directors may think fit. That the Director and Treasurer attending the receipt of subscriptions shall receive 5*s*. each for his services. That the Directors may divide themselves into rotas, or committees, for the conduct of the business, as they may think fit, (such committees or rotas to be open to the other Members of the Board,) provided however, no rota shall continue longer than three calendar months at one time, without some change of Members. That for the transaction of general business three elected Directors shall form a quorum. The Board shall meet at least twice every month and the date and place of the last Meeting having been read from the Minute book, the Bank book shall be exhibited (or in lieu thereof the Banker's receipt), and the amount deposited since the last Meeting, declared and entered as the first minute. The Board shall from time to time inspect the books kept by the Manager; and the Directors, or three of them shall have power to call a Special Meeting of the Board at any time, by giving two clear days' notice and stating the object for which it is called. In case the requisite number of Directors shall not attend, the Manager shall have power to adjourn the meeting to some other time. In case of equality of votes, the Chairman shall have an

additional or casting vote. No Director shall be present during the discussion, or at the decision of any question affecting his own interest or conduct. Any Director failing to attend his rotation at the Receipt Meetings, or to procure a substitute shall pay a fine of 2*s.* 6*d.*, or if he fail to be present within ten minutes after the appointed hour he shall forfeit one shilling.

That the Board of Directors shall consist of the Trustees, and of not less than eight, nor more than twenty elected Members.

That the following gentlemen be Directors of this Society for the ensuing year, with power to increase their number within the before-mentioned limit: — namely

XXVI. SURVEYOR.

That Mr.

be hereby appointed Surveyor to this Society.

That for every valuation and survey of property within three miles of the the following fees shall be allowed:—

Where the sum advanced does not exeeed £150, one Guinea; not exceeding £250, £1 11*s.* 6*d.*; and above that sum at the rate of 5*s.* for each additional £100 borrowed. And if the distance exceed three miles, but not more than ten miles, one shilling per mile (one way only) extra shall be charged; where, however, any greater distance be required, such additional charge shall be allowed as shall be agreed upon by the Member and Surveyor. And that in case the proposed security be deemed unsatisfactory, the above fees shall be reduced one-third.

In all cases where either Surveyor is required to supervise the erection of any buildings on behalf of the Society, the remuneration shall be specially agreed upon by himself and the Board.

XXVII. SOLICITORS.

That Mr.

be hereby appointed Solicitor to this Society.

That the Solicitor shall transact all the legal, equitable and conveyancing business of the Society; and if any dispute arise with reference to their charges, the same shall be referred to two members of the legal profession, one chosen by the Board or Member interested, and the other by the Solicitor; such Referees, before proceeding to arbitrate, to appoint an Umpire in case they should disagree: the award of such Arbitrators or Umpire to be final and conclusive.

That neither the Solicitor, Surveyor, or Manager be removed from their respective offices, except for misconduct or inability, and then only by a majority of at least three-fourths of the Directors, who, in case of a removal or resignation of such officers, shall proceed to elect other and fit persons in their stead.

XXVIII. INDEMNITY TO OFFICERS.

That the Trustees, Directors, and all other officers of the Society shall be and are hereby indemnified and saved harmless out of its funds and property, from and against all losses costs, charges, damages, and expenses, which they may incur or be put unto, in or about the execution of their respective offices, trusts, and services: and none of them shall be answerable for any act or default of any other of them, or for the insufficiency or deficiency in the title or otherwise of any security whatsoever which shall be taken for the repayment of any advance, unless the loss arising by such means shall happen through their own neglect or default, nor shall they be liable for any banker, broker, or other person, with whom the trust monies shall from time to time be deposited for safe custody, investment, or other wise, nor for any involuntary loss, misfortune or damage whatsoever, which may happen in the execution of their respective offices, services, or trusts, or in relation thereto.

Members.

Manager.

SCHEDULE OF FORMS.

A

To the Manager of the
Benefit Building and Investment Society.

SIR,—I send you the following particulars of certain premises according to Rule IV. Page 6.

Name ____________________

Address ____________________

No. of Certificate ____________________

Date ____________________

Situation and description of property, number of rooms, extent of garden, &c.

Is the property freehold or leasehold ?
If leasehold, the number of years unexpired ?
If original lease, underlease, or assignment of lease ?
Ground rent per annum ?
When payable ?
To whom, name and address ?
Taxes, rates, &c., their amount respectively ?
Does the tenant or landlord pay the rates and taxes ?
Insurance, date of payment, and name of office ?
Gross rental per annum ?
If unoccupied, what is the fair rent ?
Is the rental paid weekly, monthly, quarterly, or held on lease ?
Amount of advance required ?
Is the property subject to prior mortgage ?
If so to what amount ?
Is the applicant solvent ? ever been bankrupt ?
Is the applicant free from any judgment or other encumbrance likely to affect his real estate ?
Is the title good of such premises ?
Have any of the covenants in the lease been violated ?

B

To the Manager of the
Benefit Building and Investment Society.

SIR,—I send you the following particulars of certain buildings which I am desirous of erecting.

Name ________________________________

Address ______________________________

No. of Certificate _______________________

Date ________________________________

Description of building to be accompanied with plans.

Where to build?
Leasehold or freehold?
Ground rent per annum?
Covenants of lease?
Amount required?
By what instalments, and how often?
Has the applicant ever been bankrupt or insolvent, or has he any encumbrance registered so as to affect his estate?

C

To the Manager of the
Benefit Building and Investment Society.

SIR,—I send you the following particulars of freehold land that I am desirous of purchasing.

Name ________________________________

Address ______________________________

No. of Certificate _______________________

Date ________________________________

Description and extent of property.

Where situate,—parish, county, &c.?
The value per annum?
By whom is the land held?
To what use is the land to be applied by applicant?

D

RECEIPT TO BE ENDORSED ON MORTGAGE SECURITY.

We, the undersigned, the Trustees for the time being of the within-mentioned
Benefit Building and Investment Society, do hereby acknowledge to have received of and from the within named ——————— his heir, executors, administrators, and assigns, all monies intended to be secured by the within written deed.

As witness our hands this ——— day ——— of 18—

E

FORM OF TRANSFER.

I ——— one of the Members of the
Benefit Building and Investment Society, in consideration of ———paid to me by ———, ——— do hereby assign and transfer to the said ——— his (or her) executors, administrators, or assigns, the share (or shares.) No. ——— of and in the said funds of the said society, to hold the said unto the same ——— his (or her) executors, administrators, or assigns, subject to the payments, rules, and regulations, prescribed by the society. And I ——— sanctioned by the board of directors, do hereby agree to accept the said share (or shares) subject to the same payments, rules, and regulations.

As witness our hands and seals, this ——— day of ——— 18—

The above forms may be had on application to the Manager.

I hereby certify that the foregoing Rules are in conformity to law, and with the provisions of the statute 6 *and* 7 *Will. IV cap.* 32.

London,

The Barrister at Law appointed to certify Rules of Savings' Banks.

Copy kept.
pursuant to 9 *&* 10 *Victoria,*
cap. 27, *sec.* 12.

ACTUARY'S CERTIFICATE.

I hereby certify, that the rates of the BENEFIT BUILDING AND INVESTMENT SOCIETY *are founded upon equitable grounds and sound principles, and may safely be adopted for its use.*

Actuary.

Western Life Assurance Society,
3, Parliament Street, London.

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